EXECUTIVE SUMMARY

Coal mining in NSW is mainly concentrated on known resources of high quality black coal in the Sydney - Gunnedah Basin. There are presently 72 coal mines within New South Wales' five coalfields; 46 underground and 26 open cut operations. In addition there are 18 coal projects in various stages of development/assessment from designated Tender Area to Under Construction.

Coal production accounts for over 75% of the total value of NSW mineral production and was valued at $4.3 billion in 1995-96. NSW coal exports in 1996-97 increased almost 8% to over 67 million tonnes.

Continued growth of the coal industry in NSW is predicated largely on continued growth in coal exports, particularly thermal coal from the Hunter Valley for expanding Asian markets. Most major opencut coal resource areas in the Hunter Valley have been allocated. In the medium to long term, to maintain growth in supply, development of efficient underground operations in the Hunter Valley will become important as large opencut deposits are depleted. Raw coal production from the Hunter Valley could increase to over 100 Mt per annum by 2004 and be maintained at over 100 Mt per annum for more than 20 years.

Domestic demand for thermal coal for local power stations is likely to remain static and may even decline. Domestic demand for metallurgical coal will decline with the cessation of iron and steel making at Newcastle in 1999. The increasing use worldwide of direct reduction steelmaking technology is forecast to cause a gradual decline in the export demand for coking coal.

The ability of the NSW industry to respond to increases in export demand for coal depends on a number of key factors, including:

- *ability of coal loaders and ports to handle increased tonnages.*
- *ability of other infrastructure, especially rail, to handle increased tonnages.*
- *ability of existing and new coal mines to economically produce increased tonnages of quality coal.*
- *improved work practices.*
- *likely impact of export coal prices on ability of NSW industry to remain a competitive supplier to world markets.*
- *access to sufficient recoverable reserves of quality coal to meet demand.*

Improved mineworker health and safety is a critical issue to future coal mine development in NSW. This and environmental issues will continue be of paramount importance to the community, government and industry. Very high standards of environmental management and rehabilitation are now required of all mining operations carried out under mining title in NSW.

The coal mining industry operates in NSW under a stable royalty regime. The Department of Mineral Resources is presently reviewing the adequacy of all (environmental) security deposits and in the past three years a large number have been increased to reflect the current rehabilitation requirements.

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1. OVERVIEW OF CURRENT NSW COAL INDUSTRY

The Black Coal Industry is of vital importance to the NSW economy and to regional centres in the State's coalfields. Coal mining is mainly concentrated on known resources of high quality black coal within Permian coal measures of the 500 km long, 150 km wide Sydney - Gunnedah Basin. This extends from south of Wollongong to north of Newcastle and northwesterly through to Narrabri. Relatively minor coal resources are located in the Gloucester and Oaklands Basins.

There are presently 72 coal mines within New South Wales' five coalfields; 46 underground and 26 open cut operations (see Appendix 1 - NSW Coal Industry Profile 1997 for details of operations) . In addition there are 18 coal projects in various stages of development/assessment from designated Tender Area to Under Construction - see Appendix 2 for details.

The importance of the coal industry to New South Wales is indicated in some of the following statistics:

- Coal accounted for about 76% of the total value of production of the NSW mining industry in 1995-96.

- The value of NSW production in 1995-96 was $4.27 billion (Total NSW mineral production was valued at $5.58 billion).

- Raw coal production (preliminary) for 1996-97 was 123.45 million tonnes; a 9.2% increase on 1995-96. Saleable coal production for 1996-97 was 99.00 million tonnes; a 7.7% increase on 1995-96.

- Coal exports in 1995-96 of 62.58 million tonnes were valued at $3.32 billion. Coal exports in 1996-97 increased 7.8% to 67.46 million tonnes (value not yet available). Coal is NSW's single biggest commodity export.

- The NSW coal industry directly employs about 14,000 people (14,201 at May 1997). Many more employees are engaged in associated industries, eg power generation, coal transport and shipping, as well as a range of service and contracting industries. Coal mining in NSW has significant employment multiplier effects.

- NSW Royalty revenue from coal production in 1996-97 was $169 million (out of a total Royalty collection of $181 million for all mineral production)

New South Wales coals range in rank from bituminous to sub-bituminous in the major coal deposits. Coal qualities range from medium to high ash, low sulphur thermal coals for domestic power generation and cement manufacture to medium to low ash, high energy, export thermal coals. Low volatile hard coking coal and semi-soft coking coal, used for iron and steel production, supply export and domestic markets. There is some potential for value-adding of coal by washing and blending to suit customers' requirements but there is no practical possibility for further value adding except in the sense of producing competitively priced energy and using it to add value to other minerals.

Recoverable coal reserves in NSW exceed 10,000 million tonnes. These reserves are contained within the existing 72 operating mines and 18 major development proposals.

Detailed statistical data on all aspects of coal production, demand and supply, export and export prices, domestic consumption, employment, labour productivity, and labour earnings and costs plus gross safety statistics are given in the 1997 NSW Coal Industry Profile (Appendix 1). These statistics are collected and supplied by the Joint Coal Board Statistical Service.

2. PROPOSED NEW PROJECTS

The bulk of new proposed coal mining projects are located in the Hunter Coalfield (see Appendix 1, Table 7). The total estimated capital investment in developing these projects, should they all proceed, is about $2.3 billion and an estimated direct 2,400 jobs would be generated (see Appendix 2).

3. RESOURCES OF COAL & FUTURE SUPPLY

The 1997 NSW Coal Industry Profile (Appendix 1) provides summary data on existing coal resources for each of the five coalfields plus the Gloucester Basin and Oaklands Basin.

A major report prepared by a Working Party of the Coal Resource Development Committee in 1994, "Effects of Land Use on Coal Resources" provides detailed information and discusses many of the issues affecting coal resources and future supply from NSW coalfields (Appendix 3).

In considering the issue of future resource development and supply, the assumption is made that there will be no significant increase in the price of coal (in real terms) in the foreseeable future.

Key points regarding coal resources in New South Wales and future supply are:

- The majority of any future growth in NSW coal production will come from the Hunter Valley. All major opencut coal resource areas have been allocated, except the Mount Arthur North Tender Area and the West Scone/Castle Rocks allocation area near Muswellbrook. In the medium to long term, to maintain growth in supply from the Hunter, development of efficient underground operations will become important as large opencut deposits are depleted.

- Constraints associated with coal terminal/loader capacity at Newcastle Port will place limits on future export supply and hence local production levels.

- There is little scope for increased production from the Southern and Western Coalfields.

- Possible future supply from the Newcastle Coalfield will depend on the feasibility of mining large undeveloped underground coal resources around Wyong.

- Development of the Gunnedah Coalfield is hindered by distance from the export Port of Newcastle (about 300 km) and the lack of transport infrastructure.

- The Gloucester Basin (80 km north of Newcastle) has relatively limited recoverable coal resources and there is little scope for a major increase in supply over the medium term.

- The Oaklands Basin (in southern central NSW) has large, low quality, thermal coal resources, but suitable only for possible future local ("mine-mouth") power generation.

DISCUSSION

The **Hunter Coalfield** contains the bulk of recoverable reserves and a detailed 1996 report by J Beckett of the Department of Mineral Resources (Appendix 4) provides a detailed assessment of the future coal supply potential in the Hunter Valley.

The report indicates that total recoverable reserves of coal from this region are approximately 5,650 million tonnes, comprising 3,250 million tones of open cut coal potential and 2,400 tonnes of underground potential. (These figures include current mines, development proposals and undeveloped deposits). This represents over 55% of identified recoverable coal reserves in New South Wales.

Major findings of this report are:

- The Hunter Coalfield is the major coal producing area in NSW. Over 50% of the State's raw coal production, and approximately 60% of the thermal coal production, comes from the Hunter Coalfield.
- Expansion of export thermal coal requirements from NSW will be sourced primarily from the Hunter Coalfield for the next 20 years.
- Production from the Newcastle, Southern and Western Coalfields will, essentially, remain static, with any new mines in these areas largely replacing production lost from closure of older mines.
- Opportunities for major increases in production from the Gunnedah Coalfield do not seem likely for the next 10 years. This is due to higher freight costs and to the cost associated with developing new infrastructure to support large scale mining operations.
- To maintain required production levels, the continued development of efficient underground operations will become important as large opencut deposits are depleted.
- If the demand for thermal coal rises as predicted (international thermal coal trade to Asian markets is forecast to double to about 300 Mt per annum by 2010), raw coal production from the Hunter Valley could increase to over 100 Mt per annum by 2004 and be maintained at over 100 Mt per annum for more than 20 years.

It should also be noted that there is uncertainty regarding the economics and feasibility of many future potential underground mines in the Hunter. Many of the potentially economic coal seams have high gas contents and/or geological structural constraints to mining. Much of this coal is not of export quality and is uneconomic to mine at present (see Appendix 5).

The **Newcastle Coalfield** has resources of both soft coking and thermal coal for both domestic consumption and export. The main producing regions are the central area near Lake Macquarie and the southern area near Wyong.
High levels of population growth and residential development have occurred in these areas in recent decades and will impact on future resource development. Two resource areas near Wyong recently allocated for further evaluation contain the last significant quantity of undeveloped, export quality thermal coal (about 1600 Mt of inferred in situ resources) in the Newcastle Coalfield.

The **Southern Coalfield** is the only source of hard coking coal in NSW and supplies both the domestic steel industry and the export market from underground mines. Approximately 1/3rd of saleable output services the domestic steel industry and the remaining 2/3rds is sold as export coking (and some thermal) coal.

The remaining unallocated resources of prime coking coal underlie the Camden-Campbelltown-Picton region. This area encompasses the south-west margin of the Sydney metropolitan region and rapidly growing urban developments have the potential to significantly constrain the future development of these coal resources. The northward trending underground extraction of the resource from areas of current mining is in juxtaposition to the southerly expansion of the urban areas.

The future mineability of the resource will also be affected by flood-prone lands surrounding the Nepean River.

The **Western Coalfield** produces medium to high ash, high energy thermal coal from mostly underground mines, with approximately 1/3rd sold to local power stations and about 2/3rds exported through Port Kembla Coal Terminal.

The northern sector of the coalfield, around Rylstone and Ulan-Bylong, contains the majority of remaining unallocated and undeveloped coal resources. Much of the undeveloped resource areas has been incorporated into national parks which precludes future development.

Coal quality, access to resources and the distance from mine to Port Kembla Coal Terminal and associated rail freight costs are major constraints to any significant growth in supply from this coalfield.

The **Gunnedah Coalfield** contains substantial underground coal resources in the Narrabri and Caroona areas at depths of less than 300 m. The coal is of low ash, high energy thermal quality, with some soft-coking coal. Limited mining occurs at present, although two longer term opencut mine proposals collectively contain recoverable reserves of over 400 Mt.

Development of the coalfield is hindered by distance from the export port of Newcastle (about 300 km) and the lack of transport infrastructure. Major development in the coalfield could occur around 2010 to 2015 when the demand for coal is expected to exceed the production capability of the Hunter Valley.

However major transport infrastructure developments and increases to coal loader capacities at Newcastle would be required to facilitate major coal development in the Gunnedah Basin.

The **Gloucester Basin** is about 38 km long and 20 km wide and is located about 80 km north of Newcastle. It contains a total resource of about 200 Mt of medium ash coking and thermal coal. Limited mining occurs at present and there is little scope for a major increase in supply over the medium term.

The **Oaklands Basin** (in southern central NSW, centred about 650 km southwest from Sydney) has large coal resources (over 1,100 Mt) of moderate to high ash, sub-bituminous black coal. Some of this could be mined by opencut methods; however the resource is suitable only for possible future local power generation. Development of this resource is unlikely in the medium term, unless a major local power station was proposed.

4. CONSTRAINING FACTORS TO GROWTH

4.1 Introduction

Continued growth of the coal industry in NSW is predicated largely on continued growth in coal exports, particularly in thermal coal for electricity generation for expanding Asian markets. The Australian Bureau of Agriculture and Resource Economics (ABARE) predicted in early 1997 (Outlook 97 Conference) that total world trade in thermal coal would increase by 28% in the five year period (to 369 Mt) in 2002, with strongest demand growth in Asia.

Domestic demand for thermal coal for local power stations is likely to remain static and may even decline under the new open competition between electricity generators and distributors. Coal prices are likely to become highly competitive.

Domestic demand for metallurgical coal will decline with the cessation of iron and steel making at Newcastle in 1999. The increasing use of direct reduction steelmaking technology, such as hot briquetted iron plants and electric arc furnaces is forecast to cause a gradual decline in the export demand for coking coal.

The ability of the industry to respond to increases in export demand for coal depends on a number of key factors, including:

- ability of coal loaders and ports to handle increased tonnages
- ability of other infrastructure, especially rail, to handle increased tonnages

- ability of existing and new coal mines to economically produce increased tonnages of quality coal

- improved work practices

- likely impact of export coal prices on ability of NSW industry to remain a competitive supplier to world markets.

- continued access to sufficient recoverable reserves of quality coal to meet demand

In addition, the present low levels of industry profitability may impact on future investment in and financing of new or expanded coal development projects.

4.2 Ability of existing and new coal mines to economically produce increased tonnages of quality coal

In recent years there has been a significant growth in production from NSW coal mines to meet export demand. Domestic demand for power generation and metallurgical use has remained static and is not forecast to increase in the medium term.

Based on an analysis of coal supply potential from the Hunter Valley (see Appendix 4), NSW coal production is forecast to continue to increase at least until 2010 at which time export demand may have reached a plateau and/or existing (expanded) coal loader capacities will have been reached. An indication of possible future *raw* coal production levels from NSW to 2005 is given in Appendix 6. Current production of about 124 Mtpa is forecast to increase to about 145 Mtpa by 2004/2005 to meet export demand. Planned increased capacity to Newcastle coal loading facilities will need to proceed to make any such increases possible.

PWCS in its *Background Data report for PWCS- Kooragang Coal Terminal - Stage 3A Expansion* estimated that annual coal exports (*saleable coal*) through Newcastle would grow to between 92 Mtpa (low case in 2004) and 112 Mtpa (high case in 2014). These estimates are partly based on coal resource audit and coal supply data supplied by the Department of Mineral Resources (see Appendices 1 & 4).

Economic production of increased tonnages of good quality export coal from existing and new mines will require close management of operating costs. Productivity increases, presently being sought by many of the major producing coal mines, will be necessary for NSW mines to continue to be competitive for export contracts.

The fundamental conditions for NSW to continue to be a leading world coal exporter (for at least the next twenty years) are:

- good quality, large resources of coal able to be mined and processed, using world leading technologies, at relatively low cost.
- large economies of scale in mining and transportation.
- sufficient and efficient rail and port infrastructure

4.3 Likely impact of export coal prices on ability of NSW industry to remain a competitive supplier to world markets.

Declining export coal prices (in real terms) in recent years have forced all suppliers of export coal to continually reduce costs and become more efficient producers.

It is likely that the present trend of flat or declining prices (in real terms) for both export thermal and metallurgical coal will continue over the medium term. Hence, the quest for continual productivity increases will assume major importance to the future of the local coal industry.

The government monopoly of the State's rail freight services has ceased in NSW, and use of the rail lines has been opened up to private operators to compete for this business and deliver lower costs to industry.

FreightCorp, the government's corporatised freight rail carrier, has already significantly reduced rates for export coal to the Port of Newcastle over the last three years; including a 25 per cent reduction in average freight charges between 1995/96 and 1996/97. These reductions to industry are likely to continue over the next four years through reduced access charges levied by the Rail Access Corporation, and by intensification of open competition between FreightCorp and private carriers.

Productivity increases and cost reductions will also be very important to the future supply of thermal coal for *domestic* electricity generation. New South Wales has now restructured its electricity supply industry; opening up the electricity industry to competition between suppliers in this State and Victoria. Future competition with Queensland is also likely.

This means that significantly lower electricity prices are now available to industry, forcing power stations to continually aim to reduce their coal costs. This has resulted in power stations now seeking highly competitive tenders as well as increased spot market purchases for coal supply contracts, forcing local thermal coal producers to further reduce costs and achieve productivity efficiencies.

4.4 Continued access to sufficient recoverable reserves of quality coal to meet demand

New South Wales contains large coal resources. However, most of the lower cost resources, such as those close to the coast or under shallow cover, have been allocated or exploited. The industry will need to develop more difficult to mine and potentially higher cost resources to meet the expected future growth in coal demand.

As discussed under "Resources of Coal & Future Supply" most future coal supplies for increased projected exports will come from the Hunter Valley, primarily from large existing and new opencut coal operations over the next 20 years.

To maintain high production levels over the longer term, the development of efficient underground operations in the Hunter Valley will become important as large opencut deposits are depleted. However, the Hunter Coalfield is a geologically complex area and as a consequence the development of underground mines will need to address significant geological problems if production is to be expanded.

Because of increasing alternate land use pressures and environmental issues, coal mining in general and in the Hunter Valley in particular, is meeting increasing challenges to gaining development approval for new mining proposals.

4.5 Cumulative Environmental Impact

The Upper Hunter Region of NSW has experienced continued growth particularly in natural resources development, mining, energy and related activities. The region accommodates significant agricultural activity, and urban and rural settlement. The Upper Hunter has also major potential for increased tourism. The region is environmentally and economically highly significant to the State and nation.

The sustainable co-existence of various activities and land uses, particularly from an environmental and planning perspective, has increasingly been questioned in recent times. Intensification of opencut coal mining activities in particular has brought these concerns into focus.

Traditionally, the environmental impact assessment and decision-making processes for major resource and other developments have been undertaken on a project-by-project basis. The need to consider the cumulative impacts of various projects, land uses and activities has been recommended by recent Commissions of Inquiry into major coal mining developments.

The recent Upper Hunter Cumulative Impact Study, coordinated by the Department of Urban Affairs and Planning, has made an important contribution to the practical application and development of cumulative impact assessment techniques and to the understanding of cumulative impacts arising from land practices and land use change in the Upper Hunter.

Mining and power industries within the study area are concentrated and visibly intrusive compared with other forms of land uses such as agriculture and as such have become a focus for community concern. However, the principal finding of this study, is that based on current knowledge, and within the limitations of the current data set, there are no significant cumulative impacts associated with these industries to warrant the introduction of major regulatory changes to restrict or limit their continuation.

5. THE MARKET FOR BLACK COAL

5.1 Factors affecting supply and demand

No additional comments

5.2 Australia's place in the international coal market

Currently, NSW coal exporters are heavily dependent on the Japanese market. Increasingly, exporters will seek to reduce this dependence by diversifying into the growing markets of South East Asia, Europe and some Middle East countries.

There has been major investment by Japanese, Korean and American companies in NSW coal mines and new projects, particularly since the mid 1980's. In particular,

Japanese and Korean investment has been driven by the need to secure export supplies of quality coal for metallurgical and power generation in these countries often by related companies and organisations. Foreign equity in the coal industry also has the potential to secure greater access to overseas markets.

The entry of new coal producers, notably Colombia, Venezuala, Indonesia and China will add to the competitive pressure on Australian coal producers.

5.3 Barriers to Trade

No comments

6. PRODUCTIVITY AND COST COMPETITIVENESS OF AUSTRALIAN BLACK COAL INDUSTRY

6.1 Performance of mines

The industry and its association (NSW Minerals Council) are probably best placed to comment and provide input on benchmarking activities and best practice in comparable black coal mines and also Australian metalliferous mines.

Cost Structure

During 1993-94 (the latest year for cost statistics are available), the major cost faced by the coal sector was salaries. Freight was also a substantial cost and other costs included materials and fuels, maintenance and contractors. The share of turnover accruing to capital (for the payment of interest, depreciation and a return) amounted to 36%. Although these figures also relate to brown coal, that industry is small compared with black coal, and will not unduly influence the cost picture.

Black Coal Industry Cost Structure

	Share of Industry Turnover (Per Cent)
Wages/Salaries	19
Freight	17
Materials/Other Fuel	13
Maintenance	8
Contractors	5
Return to Capital	36
Other	2
Total	100

Source: ABS Catalogue No. 8414.

The basic cash operating costs incurred by coal mines include mine site labour costs, coal extraction and preparation costs (including overburden removal, mine shaft development, coal haulage and coal washing), rail and/or road freight, port charges and royalties and levies.

Numerous factors influence the level of these costs, including: the nature of the operation (open cut, underground using continuous mining equipment, underground using longwall); the thickness of the coal seam; the depth and age of the mine; the size of the labour force; the degree of industrial disputation; distance from the port or domestic consumer; and the ratio of saleable to raw coal.

Open cut mines on average have lower cash operating costs - particularly labour costs - than underground mines. In general, this reflects the lower levels of manning required for open cut mining. Non-labour costs for the two types of mines are much more similar. Indeed, as existing open cut mines become deeper, and the coal to overburden ratio increases, non-labour costs can easily exceed those of underground operations, particularly those using longwall mining techniques.

Potential for cogeneration, with gas extracted from underground coal mines (with high gas contents), is being developed for mutual benefit of mines and the environment (with associated CO_2 savings).

6.2 Work Arrangements

No comments in general. NSW would support positive changes to work arrangements that benefit the whole industry and the community, whilst fully protecting and enhancing workplace safety.

6.3 Occupational health and safety

This is a key issue of vital importance to the NSW Government. A poor safety performance also impacts on workplace morale and mine profitability.

Whilst the NSW Coal Mines Regulation Act 1982 may "seek to improve safety outcomes by prescribing how mines should be operated", current policy and practice by the Department of Mineral Resources' Mine Safety and Environment Division is to

move from a prescriptive regulation environment to a “duty of care” regulation supported by enforcement both for coal mines and non-coal mines.

Coal mining safety in NSW is regulated by the Coal Mines Regulation Act 1982, administered by the Department of Mineral Resources. In late 1995, the Department grouped its coal and non-coal mining inspectorates within a single “Mine Safety and Environment” Division. The two inspectorates continue to administer separate mine safety regulations - one for coal mines and one for metalliferous and industrial minerals (including extractive materials).

The Department promotes an improving safety culture in the industry, and encourages and monitors actions that reduce the possibility of injuries and ill health arising from mining.

The Department is gradually complementing its conventional regulatory and inspectorial role with a more educative and facilitating role. It is particularly concentrating on raising industry’s awareness of safety and the adoption of safety principles and systems as an integral part of mining operations.

A primary focus for the Department has been to develop a complete and effective understanding by mine management of all the risks associated with coal mining. Development of suitable management plans to effectively manage gas outbursts, spontaneous combustion, and high levels of methane and carbon dioxide gases, supported by detailed risk analysis, have been important initiatives to enhance greater awareness of safety in coal mines.

Detailed investigations of serious incidents and fatalities are carried out to evaluate how these fatalities or incidents occurred and what action is necessary to prevent a possible recurrence of similar accidents. The findings and recommendations stemming from the disaster at the Moura mine in Queensland, along with the release of the report into the Endeavour Colliery (NSW) explosion have been the subject of detailed study and discussion. A number of joint Queensland and NSW task groups were charged with implementing the findings and recommendations of the Moura Inquiry. The yet to be released findings of the current Inquiry into the Gretley Mine tragedy in NSW will similarly demand detailed study and appropriate positive action.

Health and safety have always been critical and contentious issues in the development of the Australian black coal industry over the past 200 years. In NSW, there have generally been significant overall reductions in the last fifteen years, statistically, in terms of the numbers of fatalities per million employee hours and per million tonnes of raw coal produced, and improvements in the lost-time injury rates(see Appendix 1, p254). However, too many fatalities continue to occur.

The Industry Commission’s recent inquiry into health and safety examined many aspects of the mining industry’s performance.

The Minerals Council of Australia 1995-96 “Safety and Health Performance Report” emphasises the priorities for mining safety - being firstly underground metalliferous mining then underground coal mining. This report also compares Australia’s performance with overseas countries.

The unacceptable number of fatalities in the NSW industry, prompted the Minister for Mineral Resources to commission a wide ranging independent review into mine safety for the whole industry (both coal and non-coal mining), and in April 1997 a report was tabled in the NSW Parliament.

The *Review of Mine Safety in NSW* examined the safety practices of both industry and the NSW Department of Mineral Resources and presented 44 recommendations that addressed areas requiring change. (see Appendix 7).

The Minister has established a two tiered tripartite implementation process to respond to the Report's recommendations, including a "steering group", which has been set to supervise the work of an "implementation group". The implementation group has been charged with developing plans for each of the recommendations of the *Mine Safety Review*. Tripartite task groups, again consisting of representatives from government, industry and unions, have already commenced work under the direction of the Implementation Group.

This "top to bottom", comprehensive tripartite process will ensure that all stakeholders have their say in how the NSW mining industry should address critical safety issues. Significant progress on implementing the 44 recommendations is expected by April 1998.

6.4 Performance of coal infrastructure

6.4.1 Cost of transport of black coal

The most common methods of transporting coal in NSW are rail, road and conveyor. Rail is the most effective means of long distance transport, especially for exporting coal. The rail network serving NSW's coal mines extends over 1050 kilometres. Export coal is currently loaded at 29 rail terminals, most of which have balloon loops and rapid overhead loading bins able to load maximum sized trains. The rail system's track capacity and infrastructure is well positioned to meet foreseeable projected haulage demand.

In 1996, the NSW rail system was restructured to allow open access to rail infrastructure in accordance with national competition policy. The State-Owned Corporation FreightCorp hauls the majority of NSW export coal to the ports. FreightCorp utilises a fleet of more than 100 locomotives and 2 000 wagons which operate 24 hours a day in dedicated unit train operations.

Road transport is utilised for short distance coal haulage from mines to rail head, and for delivery to local domestic customers. Conveyors are used extensively for short distance transport within the mine lease area and from mines to power station stockpiles.

Diesel fuel excise

One significant input cost for the coal industry is the diesel fuel excise. This Commonwealth tax imposes a heavy burden on the industry with some estimates having put its annual impact on rail in NSW alone at around $50M. Inevitably, these

costs are passed on to mine owners by rail freight operators in the form of higher freight rates.

The NSW Government is anxious to see this excise removed from rail and the Minister for Transport has raised the matter on numerous occasions with the relevant Commonwealth Ministers. However, to date, the Commonwealth has been reluctant to remove the charge. This is disappointing and at odds with the desire of all Governments to improve efficiencies in Australia's export coal industry.

The arguments against the tax are strong and the Industry Commission has cogently argued for, and recommended its removal, in past Reports (see *Rail Volume 1: Report No. 13, 1991 and Petroleum Products: Report No. 40, 1994*). Essentially, the excise is a road-user charge and its application to rail sees it (the rail industry) subsiding road users, especially heavy vehicles.

This is a perverse outcome when road and rail are competitors in the same market. In fact, the impact of the tax is felt in both bulk and containerised rail freight and is inimical to achieving optimum efficiency levels. The removal of this excise would be a significant step towards improving the operating efficiency of this segment of the coal industry.

6.4.2 Access arrangements

Under the *Transport Administration Amendment (Rail Corporatisation and Restructuring) Act 1996*, the ownership, provision of third party access and maintenance of railway track (previously owned by the State Rail Authority) was separated from the operation of train services. This separation took effect on 1 July 1996. Rail services in NSW are now provided in line with the following roles and responsibilities:

- Rail Access Corporation - ownership of infrastructure, except rolling stock and stations;
- Railway Services Authority - track maintenance and construction;
- State Rail Authority - rail passenger business in the form of CityRail and CountryLink;
- FreightRail - separated from State Rail Authority, corporatised and renamed FreightCorp; and
- Public Transport Authority - coordination of all passenger transport services.

The Rail Access Corporation's Pricing Policy sets out the parameters for access pricing negotiations with its customers. The Rail Access Corporation will be required to negotiate an appropriate contribution by all operators, train movements and traffic above incremental costs, up to ceiling limits specified in the regime.

Operators unable to arrive at an agreed access price with the RAC have a right to arbitration before the Independent Pricing and Regulatory Tribunal if negotiations prove unsatisfactory. NSW has adopted a "negotiate and arbitrate" approach to access pricing within the parameters of the floor and ceiling test noted above.

The NSW Access Regime has been submitted to the National Competition Council (NCC) for certification as an effective regime in accordance with the Competition Principles Agreement. Officials are presently discussing the Regime with the NCC and it is possible that amendments to the Regime could result from these discussions. A copy of the Regime gazetted on 21 August 1996 is attached at Appendix 10.

The principles that should guide the setting of access prices

There are special pricing principles which apply to coal haulage in NSW's Rail Access Regime. However, these principles are in place only for a transition period. Although the intention of the National Competition Policy was to allow for the exclusion of Government coal traffic until November 2000 through establishing a "moratorium", the NSW Government took the policy decision to use the moratorium period:

- Only in respect of coal access prices and not access per se; and then
- To implement a program of phased reductions in coal access prices, rather than maintain prices throughout the period.

The Government is committed to phasing out the impact of the coal haulage monopoly over the five year coal moratorium period. In announcing the transport reforms in August 1995, the Premier stated that access to the Hunter Valley rail system will be developed in the context of an overall Statewide rail access regime. In practical terms, the Government indicated that monopoly rent would be eliminated via reductions in access charges over the moratorium period.

The ability of mines to pay monopoly rent depends on a number of factors including the quality of the coal, extraction costs, customer contracts and taxation and charging regimes. Within any region, there may be significant differences among the mines on these factors, and therefore in freight rates, haulage costs and thus monopoly rent. Indeed, not all freight hauls contribute to monopoly rent.

The Government's approach to monopoly rent has been that, in order to eliminate it, it must be firstly identified and estimated. The mechanism for achieving this aim is for monopoly rent to be built into initial coal access charges and then progressively reduced. A complete phase-out will be achieved over the next three years.

Monopoly rent estimates are based on estimates of revenues and costs. The definition of monopoly rent used is the per tonne excess of income over the costs of running the above and below rail businesses including the cost of the assets. To calculate this excess, it is necessary to estimate the costs of above rail operations, and the costs of access, with both including a return on assets.

This requires a determination of above rail costs such as train operations, and below rail or access costs. Given that monopoly rent is an excess over costs including returns on assets, but excluding any estimate of goodwill, the appropriate determining point for below rail costs is the ceiling access charge under the general non-coal pricing principles of the Regime.

In summary, the NSW scheme for dealing with monopoly rent, where it occurs, is for payment by operators to the Rail Access Corporation of base and adjustment

components of access charges. These are calculated on the basis of 1996-97 expected freight revenues and estimated costs. They are calculated and applied on an origin-to-destination specific basis. There is no averaging among mines.

6.4.3 Infrastructure ownership and investment

Ability of coal loaders and ports to handle increased tonnages

New South Wales has two coal export ports - Port Kembla and Newcastle Port.

Port Kembla has one coal loader (terminal) owned by the State Government and leased to a consortium of coal mining companies (see Appendix 1, p161). and has a capacity to export up to 16 Mt per annum. This loader is presently not fully utilised with exports of 11.4 Mt, 12.0 Mt and 11.1 Mt of coal recorded in 1996-97, 1995-96 and 1994-95 respectively.

Coal exports from Port Kembla are a mix of metallurgical coal (about 53%) and thermal coal (about 47%).

The Port Kembla Coal Terminal has the capacity to handle increased export tonnages, but these are unlikely to eventuate due to forecast static production levels in the future from both the Southern Coalfield and Western Coalfield (see "Resources of Coal and Future Supply" above and Appendices 1 and 3)

Newcastle Port has two coal terminals - PWCS Kooragang and PWCS Carrington, operated by PWCS (Port Waratah Coal Services Ltd; major shareholders Newcastle Coal Shippers Pty Ltd, Coal & Allied Industries Ltd and Japanese coal interests - see Appendix 1, p162).

PWCS Kooragang has a site area of 161 ha and PWCS Carrington has a site area of 51 hectares. Combined annual capacity is 66 Mt per annum.
This capacity is now being severely tested. Exports have steadily risen in recent years to 56.1 Mt in 1996-97 from 50.5 Mt and 47.7 Mt in 1995-96 and 1994-95 respectively. Coal exports are a mix of thermal coal (about 65%) and metallurgical coal (about 35%).

The last three to six months has seen large numbers of ships berthed off Newcastle Port waiting to be loaded. During this period the Coal Terminals have generally been operating at or near "nameplate" capacity; however the combined tonnage loading requirements generated by the large number of vessels arriving have at times greatly exceeded this capacity.

PWCS is proposing to embark on a "step-by-step" expansion program. The initial step will increase export capacity to a level of 76 Mtpa within two years as projected growth in exports proceeds. A further incremental capacity increase of about 4 Mtpa is expected to be achieved in the near future by "fine tuning" the existing facilities. The present capacity of 66 Mtpa was achieved in August 1996, following commissioning of a second rail unloading facility at Kooragang and a second shiploader.

PWCS has commenced a program of consultation concerning the long standing plan for a Stage 3 expansion of the Kooragang coal terminal. The expansion is expected to cost about $700 million and will ultimately raise the total capacity of PWCS to over 100 Mtpa.

DISCUSSION

It would appear that coal exporters are hoping to achieve significant increases in mine productivity before committing to the large investment required for the Stage 3 expansion.

In the meantime, there is a continual growth in demand for Australian export coal (particularly thermal coal) and there appears to have been a recent lack of coordination/planning in coal export shipping and loading at Newcastle Port.

The bulk of the State's export coal industry is dependent on continued smooth operations and growth in capacity at PWCS Newcastle operations.

Major overseas customers may have strategic concerns that the current and future supply of coal from NSW is largely dependent on the continued and constant efficient operation of a single port and two coal loaders. However, given the strong environmental sensitivities surrounding port developments (and associated infrastructure costs), it is most unlikely that a new export coal loader facility at another NSW port could be built.

Ability of other infrastructure, especially rail, to handle increased tonnages

Rail infrastructure from most existing mines generally appears to be sound. It is understood that existing rail lines, available locomotives and coal wagons and associated infrastructure in the Hunter Valley (the main current and future source of export coal) have the capacity to handle up to 100 Mt per annum of export coal from mine and washery to coal terminals.

There may be some concerns regarding the unloading capacity of rolling stock at coal terminals, although a planned third unloader at Kooragang should obviate this concern.

Current rail infrastructure projects include the planned construction of a 16 km rail link to connect the existing railhead at Mount Thorley with two other mines (United, Wambo) south of Singleton. Construction of this $50 million new rail facility will not only improve coal transport from these mines to the coal terminals; it will also remove about 150,000 truck movements per year from roads.

Clearly, with the future development of new projects, such as Bengalla, Mount Pleasant and, in longer term, Mount Arthur North, investment will be required to extend and upgrade rail infrastructure in the upper Hunter Valley.

Rail Access Corporation, FreightCorp and exporting coal companies will be able to provide more detailed information on this important area.

Proposals have been put forward to build a rail tunnel through the Liverpool Ranges to make coal development in the Gunnedah Coalfield more feasible by linking it directly to the Hunter Valley. However, given the large capital investment required and the present limits on coal exports due to existing coal terminal capacities at Newcastle Port, this proposal does not appear to be feasible, at least in the medium term.

There does not appear to be any major constraints to current or increased NSW coal production associated with other necessary infrastructure, such as **roads, power, water, and communications**. Of these, water availability for coal washing and wastewater management are important issues which coal companies need to plan for with relevant authorities and constantly monitor.

7. OTHER EFFECTS OF GOVERNMENT ON AUSTRALIA'S BLACK COAL INDUSTRY

7.1 Royalty arrangements

The approach most commonly used to the problem of securing a return for the community from the exploitation of a resource, with an unknown initial value but with some probability of a future high value, has been to require payment in the form of royalties after resource delineation and production take place. It is essential, however, that the royalty system used is based on the real resource value. If the royalty is too low then the Government is effectively losing revenue by selling its resource too cheaply. If it is too high then it is reducing the level of resource development and economic activity which is viable in the State.

The present royalty system applying to coal in New South Wales can be described as a flat rate royalty which requires the payment of a fixed dollar amount per tonne of production, at the point of sale or disposal. No distinction is made regarding end use or quality; export or domestic coal. Industry interests have commonly voiced concerns re inequity in not distinguishing between prime export thermal and metallurgical coal (higher value) and domestic thermal coal (lower value).

Total coal royalty revenue for 1996-97 was $168 million (about 95 per cent of all mineral royalties). All Coal royalty is payable one month in arrears on coal disposals. The Department of Mineral Resources collects coal royalty revenue which is then paid into the Consolidated Fund.

History of royalty arrangements in NSW

Prior to 1974, royalty rates were fixed for the term of a coal lease (generally 20 years). In 1974, this was changed by legislative amendment to a common rate for all leases which would be prescribed from time to time (the initial rate was $1.00 per tonne).

The increase to $1.70 tonne from 1 February 1981 was based on CPI movements over the period from 1975 to 1981.

The statutory royalty rate has not increased for 16 years — it remains at $1.70 per tonne. Because it is a fixed, volume based rate, the real annual return per tonne to the State has declined significantly during this period. Had the Government adjusted the royalty rate to reflect CPI movements since 1981, the 1997 royalty rate would be more than $4.00 per tonne.

On 1 July 1987 the statutory royalty rate was temporarily reduced to $1.36 (20 per cent reduction) in response to falling world coal prices and mine closures. The reduction was initially for a twelve month period but as a result of industry pressure it was extended for a further 13 months.

The majority of coal in NSW is Crown mineral. However a significant quantity of the mineral is presently privately owned. Royalty is currently refunded to private owners of coal.

The Government introduced a 'super royalty' in 1979 which was set in the following way:

- where coal leases were granted over additions to existing colliery holdings (areas greater than 1 hectare) and over entirely new coal mining areas, a rate of $1.05 applied (effective 1979);
- this super royalty rate was indexed to the CPI for subsequent new coal mining leases. This set rate was then fixed for the first five years of the coal lease after which it escalated at 5 per cent per annum.

The 1987 review of royalty arrangements resulted in the abolition of super royalty for underground mines and the reduction of super royalty for open-cut mines to $0.50 per tonne (effective 1 May 1987). Super royalty is not collected on privately owned coal.

New arrangements for levying royalty on *coal reject* were introduced in March 1997. The rates or royalty will be no more 50% of the prescribed rate, each case will be assessed individually. At present one operation has been given a rate 5% of the ex mine value of the coal reject material.

Alternative royalty structures

There are three main ways of structuring a royalty:

1. specific or flat royalties;
2. *ad valorem* royalties; and
3. resource rent royalties.

Specific royalties are levied as a dollar amount per tonne.

- A flat rate royalty has the distinct advantage, relative to other royalty systems, of being simple to calculate for both the government and industry. The only parameter which needs to be known in order to calculate the royalty payment for any particular mine is the output produced (ex mine or washery) or sold (fob or cif for exports), or 'delivered' to local users.
- From the government's point of view, flat rate royalties also provide a reasonably assured source of revenue, despite wide variations in industry profitability.
- The major disadvantage of a flat rate royalty stems from the fact that an output based royalty takes no account of the cost of discovering or extracting the resource in question, or the return. With the rate of royalty arbitrarily set, royalty payments are likely to be either too low or too high with respect to the value of the coal. If the rate is too low, the State forgoes an appropriate payment for the use of a Crown resource. If the rate is too high, it may lead to the sterilisation of coal reserves.
- There is uncertainty for mining companies to the extent that rates are varied.

Ad valorem royalties are levied as a percentage of the values of output (eg fob value)

- This mechanism provides Government with a reasonably assured source of income and is simple for both Governments and companies to calculate.
- Coal royalty payments will vary according to movements in coal prices (and volume).
- It also automatically adjusts for movements in the coal price.

But there are disadvantages with an ad valorem system:

- The royalty may bear little relation to the current economic value of particular coal resources.
- If applied at the point of delivery or the export port, they can hit mines characterised by high transport costs.

Resource rent royalty (RRR) systems are based upon the principle that a payment to government for the exploitation of a natural resource such as coal should be derived from the economic rent which the resource produces. The economic rent of a factor of production, such as a mineral deposit, is defined as a payment to that factor in excess of its supply price or whatever payment is required to keep it in use. Thus, a coal company examining the development of a new mine would require a return on investment equal to that available from alternative investment of a similar risk category before proceeding. Anything over and above that would be considered rent.

In the calculation of rent for resource royalty purposes all capital and operating costs are expensed immediately against revenue (no depreciation schedule or division between equity and debt capital). Undeducted losses are carried forward at the threshold rate which is intended to reflect the rate of return on capital required to maintain investment in the industry. In effect, no royalty payments are made until establishment and operating costs, plus a return on capital, have been covered.

The RRR has the considerable advantage that it can have a close to neutral effect on investment in the industry. Properly calculated, it should not prevent new investment, even in marginal mines, and should not close mines prematurely. The mechanism automatically takes into account movements in costs and prices and, through the threshold factor, allows for inflation and a necessary return on all invested funds, not just debt capital.

However, there are a number of problems associated with implementing a RRR in practice, namely:

- determining each firm's true cost of capital;
- defining the tax base and, the tax unit (project versus company);
- implementation in the context of other, in situ, royalty arrangements.

Coal ownership in New South Wales

When Governor Arthur Phillip took possession of the east coast of Australia in 1788 the Crown acquired all the coal in the land. Phillip and subsequent governors granted Crown land to the early settlers with reservations to the Crown. These reservations

always included gold and silver. Usually coal was reserved but sometimes it was included in the grants.

From 1830 to 1850 coal was always reserved to the Crown as part of a coal mining monopoly agreement with the Australian Agricultural Company. When this monopoly ended in 1850, Governor Fitzroy issued a proclamation abrogating all coal rights reserved by the Crown so that coal in land situated outside of the cities, townships and villages then existing passed into the ownership of the owners of the land.

In 1884, the New South Wales Parliament provided that coal was to be reserved from all future grants except those issued for mining purposes. Until the Crown Lands Consolidation Act 1913 it was possible in some cases to convert land granted for mining purposes and so obtain title to coal but with these exceptions the only private coal titles now in existence derived from grants issued before 1884.

During the 1970s, the NSW coal industry expanded rapidly into new areas. Towards the end of that decade, about 30 per cent of coal production involved the mining of private coal and in some areas, such as the upper Hunter, private ownership approached 100 per cent.

In 1981, the Wran Government introduced the Coal Acquisition Act as a way of removing the historical anomaly that allowed private coal ownership in New South Wales. It was argued that coal royalties should be paid to the Crown to cover the cost of developing the economic infrastructure (ports, rail, roads) and social infrastructure (schools, hospitals and other community services) in these new areas.

The NSW Coal Compensation Board commenced its operations on 22 June 1985. The Board was empowered to receive claims for coal compensation from former coal owners and others suffering loss as a result of the imposition of the Coal Acquisition Act 1981.

In 1990, the Greiner Government introduced the Coal Ownership (Restitution) Act which provided former private coal owners the opportunity to have their title restored for coal outside collieries or to accept an offer of financial compensation.

The policy of allowing the restitution of coal titles to former private owners resulted in a significant number of applications for restitution, a small proportion of which involved large areas of coal in existing and planned mining areas, particularly in the upper Hunter. Towards the end of 1995, the Minister for Mineral Resources established the Coal Restitution Taskforce to examine the financial and economic impact of the 1990 restitution legislation.

In its report to the Minister in April 1996, the Taskforce estimated that the NSW Government would lose more than $300 million (present value) in coal royalty under the prevailing arrangements.

Based on the recommendations of the Taskforce, the NSW Government introduced the Coal Acquisition Amendment Act 1997 to enable the re-acquisition of a small number of titles and to clarify the Minister's power to refuse restitution applications.

The Commonwealth Government would have benefited from continuing the policy of restoring all coal titles. The Commonwealth collects tax revenue from individuals and companies receiving royalty income from the mining of their private coal. The Taskforce estimated the total potential gain to the Commonwealth from private coal ownership in New South Wales at more than $100 million (present value).

The Coal Acquisition Amendment Act 1997 will effectively restore a competitively neutral position for operators in the coal industry. Under current royalty arrangements, companies with open cut operations that mine Crown coal pay an additional 'super' royalty of 50 cents a tonne. However, companies with open cut operations mining privately owned coal are not liable for this royalty.

This anomaly between Crown and private coal was a probable factor influencing the decision to seek restitution. Coal companies had an incentive to encourage eligible claimants to apply for restitution of coal title, thus enabling the coal company to avoid super royalty should the coal be mined. While private coal owners may have benefited financially from this arrangement, open-cut operators mining Crown coal are placed at a competitive disadvantage and the State loses significant super royalty income.

The Coal Acquisition Amendment Act 1997 will only affect a minor proportion of the more than 10,000 eligible claimants. The Coal Compensation Board is likely to re-acquire about 20 titles and refuse restitution to about 100 claimants seeking restitution.

Those who have their coal title re-acquired or application for restitution refused are paid fair and equitable compensation. To date the Coal Compensation Board has paid out more than $400 million to the eligible claimants.

Each claimant will have the opportunity to put statements and arguments to the Coal Compensation Board before compensation is finally determined. If a claimant is not satisfied, there is an opportunity to appeal to the Coal Compensation Review Tribunal. If still dissatisfied, claimants may obtain judicial review of the compensation determination by the administrative division of the NSW Supreme Court.

7.2 Microeconomic reform

Competition in the electricity industry

About a quarter of NSW coal output is used by the domestic electricity industry. Increased competitive pressures in the electricity market have forced power stations to improve their operational efficiency and to lower their input costs, most notably the purchase price of coal.

Reform of the NSW electricity industry has been proceeding since 1991 in the context of a commitment to establish a competitive market on the eastern seaboard for electricity generation and distribution.

The pace of reform accelerated with the release of the Government's *Electricity Reform Statement* in May 1995. The Statement laid out a detailed program for the introduction of competition into the State's electricity industry. There are four streams to the reform program:

- the creation of a competitive industry structure;
- the establishment of a supporting legislative framework;
- the commencement of a NSW wholesale electricity market; and
- the development of a program for the introduction of competition into retail electricity supply.

Following independent reviews of generation and distribution structure, the electricity industry bodies have been substantially restructured and the legislative framework completely revised.

The NSW electricity industry has been separated into its regulatory and operating parts (generation, transmission, distribution and retail) and the latter then separated into its natural monopoly (transmission and distribution) and competitive parts (generation and retail).

On 1 March 1996, a substantial part of Pacific Power's electricity generating capacity was disaggregated into two new generator entities: Delta Electricity and Macquarie Generation. Pacific Power continues for the Eraring power station. A program of amalgamations reduced the number of electricity distributors from 26 to 6.

Excluding Pacific Power, the 8 new businesses (2 generators and 6 distributors) were established as State-owned energy services corporations under the *Energy Services Corporation Act (NSW) 1995*. Administered by independent boards with a strong commercial focus, they are accountable to the Government as their shareholder, and each year must formulate a statement of corporate intent.

The substantial reform program introduced in New South Wales has established a competitive structure and framework for the State electricity sector and has created the basis for the introduction of interstate trade.

A competitive market in wholesale electricity commenced on 10 May 1996. Since 1 October 1996, any licensed retailer, irrespective of ownership or location, has been able to trade in the market. In addition to trade in the wholesale electricity market, open interstate trade between NSW and Victoria has been possible since 1 July 1997. Competition from interstate generators has placed a further commercial incentive on NSW electricity generators to lower operating and input costs.

The recent Hogg Committee Report into the Sale of the NSW Electricity Assets (NSW August 1997) stated that the "move from central control of NSW electricity supply to competition was necessary to improve the way the industry allocates resources and to set the scene for greater efficiency and lower prices in the future" (p. 35).

The Committee also considered that there are some aspects of the current regulatory framework for the electricity industry that could be strengthened even if the utilities remain in government ownership. The Committee suggested a review to examine the following regulatory changes:

- responsibility for administering licences in the NSW electricity market to be transferred from the Minister for Energy to an independent body;
- IPART to take over responsibility for administering the licensing system;

- licence conditions to include consumer measures such as service standards and environmental requirements that reflect government policy. Licence conditions to be explicit and transparent to reduce uncertainty for licence holders and customers; and
- licence conditions to explicitly state the minimum requirements or outcomes rather than prescriptive details, where possible.

These regulatory changes have the potential to further clarify the conditions in which competition occurs amongst the State's generators. Therefore, irrespective of whether the NSW electricity industry remains in public ownership or is sold to private operators, the generators will be forced to continually seek better value in coal purchases.

7.3 Regulations affecting the black coal industry

Current approach to assessment of major projects

Under the Environmental Planning and Assessment (EP&A) Act, the majority of development proposals involving the extraction of mineral and coal resources are considered under Part 4 of the EP&A Act. The authority which determines the development proposal will generally be either the Minister for Urban Affairs and Planning or the local council. Most mining projects are also "designated development" under Schedule 3 of the Environmental Planning and Assessment Regulation 1994 (EP&A Regulation), as they have the potential to cause a significant environmental impact. This means that an environmental impact statement (EIS) must be prepared to accompany a development application (DA). These documents are publicly exhibited for at least 30 days. The EP&A Act provides for extensive public participation and rights of objections or appeals by way of Commissions of Inquiry (COI) or the Land and Environment Court.

Determination of Development Applications by the Minister for Urban Affairs And Planning

Under the existing NSW planning legislation, most development proposals of State or regional significance, particularly coal mines, will be either subject to section 101 of the EP&A Act, or State Environmental Planning Policy No.34 - Major Employment Generating Industrial Development. Under both these mechanisms, the proposals will be determined by the Minister for Urban Affairs and Planning. Determination of major mining projects at the State Government level reflects their importance to the State and National economy and ensures that a consistent approach is taken to their assessment and determination.

(a) Section 101 of the EP&A Act

Under section 101 of the EP&A Act, the Minister has the discretion to "call in" a development application for determination, where it is considered the matter is of State or regional significance, and that it is expedient in the public interest to do so. Under this mechanism, the DA is still lodged with the local Council which undertakes public exhibition and notification before referring the DA, with recommendations to the Minister for his determination.

In recognition of the continued importance of the coal industry to the State, successive governments have maintained a general section 101 Direction for coal mines. Under this Direction, all development applications for new coal mines that require a new coal lease under section 63 of the Mining Act 1992, must be forwarded via the Department of Urban Affairs and Planning to the Minister for a final decision.

(b) SEPP 34

State Environmental Planning Policy No.34 - Major Employment Generating Industrial Development was introduced in 1993 in recognition that major industrial development of State environmental, social and economic significance should be determined at the State Government level to ensure consistency and efficiency in the decision making process for significant industrial development proposals.

The policy applies to developments with a capital investment value of at least $20 million (excluding land value) and/or that will employ at least 100 people at the post-construction stage (20 people for intensive livestock operations). Development types covered by the policy include intensive livestock operations, food or beverage processing, timber, pulp or paper processing, mining, and chemical processing.

The policy is consistent with both the economic and environmental objectives of the EP&A Act. Environmental impact assessment and public participation requirements set down under the EP&A Act and accompanying regulations are in no way circumvented by the policy.

Developments considered under the policy are generally large scale industrial proposals which often involve complex environmental and social issues requiring co-operation between State and local government.

(c) Commission of Inquiry

For those proposals which are subject to both section 101 and SEPP 34, a Commission of Inquiry may be held. The COI process provides a forum for a thorough and independent examination and assessment of all the proposal's environmental aspects. If an inquiry is held, recommendations are made to the Minister who then makes the final decision.

Facilitation of EIA process

It is essential that the environmental impact assessment (EIA) process adds value to the environment and development opportunities and enables the integration of locational, environmental, and social considerations in development projects. It is critical for the process to add value to both projects and decision making. To add value to the approvals process and reduce unnecessary delays, the process can be facilitated by:

- Early and ongoing consultation between the local community, councils and government agencies to help identify key issues and concerns, and reduce delays in development assessment (for example, planning focus meetings and community

consultation processes);

- Recognition by a mine company of the substantial lead time needed for feasibility and financial planning as well as for addressing environmental planning considerations;

- The preparation of an EIS which identifies and covers the relevant issues, focuses on those of most concern and demonstrates that the broad social, environmental and economic benefits outweigh the adverse impacts; and

- Flexibility and willingness to negotiate by all parties with an interest in the project.

Initiatives by the Department of Urban Affairs and Planning (DUAP)

1. Mining and Extractive Industry Working Party

DUAP has been chairing and co-ordinating a working party on mining and extractive industry, which has joint State, local government and industry representation. The working party has been developing several initiatives to achieve more efficient and effective assessment and decision making procedures for mining and extractive industry projects, while also providing for environment protection and community participation.

The key initiatives now being addressed by the working party involve the preparation of:

(a) Best Practice Guidelines for Community Consultation

The NSW Minerals Council, with the support and advice of the mining and extractive industry working party, has arranged for a consultant to draft best practice guidelines for community consultation on proposed mining and extractive industry projects. Following review by the working party, the draft guidelines are now near to completion for publication.

The guidelines will include advice on:

- Explaining why the community should be consulted
- The need for developers to actively seek those in the community who may be interested in a project
- How to identify the interested members of the community and how to contact them
- Developing a suitable community consultation program to meet the specific circumstances, using a variety of consultation methods
- Dealing with the media, including preparing a media strategy which involves properly informing the media about projects and their implications
- Ensuring community consultation by a company is thorough and is adopted and supported at the highest corporate level within a company.

(b) Best Practice Guidelines for Planning Focus

Planning focus is a process which establishes efficient, structured communication between development proponents and relevant State and local government authorities. In the mining industry the process was initiated for coal mining projects by the NSW Department of Mineral Resources in 1983. It has subsequently been used on major coal and minerals projects.

The planning focus process includes one or more meetings if necessary, between the development proponent and authorities, to provide:

- A forum for proponents to introduce projects and explain the various project components and social and environmental considerations
- A contact point for the various government agencies to identify key environmental issues of concern; formulate and advise on the key issues they want proponents to analyse and assess; and to provide the main standards, criteria and guidelines that will be used by authorities in the assessment and determination of projects.

Planning focus provides a basis for formulating key planning and environmental requirements in an integrated whole of government input into project assessment. It is important to note that planning focus establishes a sound basis for ensuring that projects are adequately described and their implications are properly identified and addressed. The decision making process on whether a project can be approved and if so, under what conditions, follows on from, and is separate to the planning focus process.

(c) Guidelines for Co-Ordinated and Consolidated Development Consent Conditions and Other Approvals

The objective of the guidelines is to provide a structured procedure and administrative tool to ensure NSW Government statutory authorities, including local Councils, set out and implement coordinated and consolidated conditions of development consent and other approvals for the mining and extractive industry sector. The main objective is to avoid duplication and inconsistencies between various requirements and permits.

Consolidated conditions in a document arranged in the conditions framework format do not substitute for, nor replace the legal requirements of various licences, permits or other approvals. The actions to prepare consolidated conditions are in the main administrative arrangements being promoted as good practice. The legislative and regulatory requirements of the different agencies are not affected.

A memorandum of understanding (MOU) has been drafted to establish agreed procedures between agencies for implementing the provisions of the guidelines. The intention is for the Department of Urban Affairs and Planning (DUAP) and each of the other agencies involved to nominate a senior level officer to be the central contact point with responsibility for implementing the guidelines.

The guidelines and conditions framework will be tested initially for a trial period of one year on a number of specified major projects. The projects proposed to be used in the trial will be those mining and extractive industry development proposals to be determined by the Minister for Urban Affairs and Planning and those involving

designated development which are to be determined by local councils. The trial will begin when the MOU has been formally agreed to and the procedures have been approved within government. Appropriate adjustments will be made to the procedures in response to the experience gained from the trial. The guidelines will be reviewed periodically thereafter as the need arises.

2. Compliance With Consent Conditions

Over the past few years DUAP has been placing significant emphasis on ensuring compliance of conditions of consent where developments, particularly coal mines, have been approved by the Minister. To this end, DUAP has in place procedures to ensure that compliance with conditions of consent is achieved through a mines' environmental reporting, post consent auditing and independent monitoring. Some of DUAP's activities in this regard are:-

(a) Environmental Management Plans

All coal mine developments are required, through the inclusion of a condition of consent, to prepare an environmental management plan (EMP). The EMP requires the mine operators to report annually on environmental performance and compliance with conditions of development consent. The annual report is required to be made publicly available at the local council offices. The EMP is also used by other government agencies in reviewing their various approvals and licences on issues such as noise, dust and water quality;

(b) Independent Environmental Audits

It is also a standard requirement, as a condition of consent, that regular independent environmental audits be undertaken of mining operations, to the satisfaction of the Director-General of Urban Affairs and Planning. The audits are to be conducted by duly qualified independent persons approved by the Director-General in consultation with the relevant local council and community consultative committee. DUAP is currently reviewing this requirement with a view to strengthening the independence of the process;

(c) Procedures for Independent Post-consent Noise Monitoring

DUAP has recently formulated consistent procedures for independent noise monitoring of mines where conditions of consent provide for acquisition of property when it can be proved that the mine is not meeting the relevant amenity criteria for noise.

DUAP is very aware of the community's concerns with regard to on-going environmental management of mining operations and the need for credibility in monitoring conditions of development consent. Accordingly, DUAP is to:-

1) Review current conditions relating to the monitoring of consents for coal mines in order to ensure that DUAP can adequately enforce compliance;

2) Conduct a series of audits of major industrial projects, including mines, to ensure compliance by companies with conditions of consent placed on projects to protect the environment and the community.

Monitoring of conditions of consent not only ensures that there is responsible environmental management in the mining industry, but that the consent conditions are constantly reviewed through DUAP with a view to ensuring that they are effective, relevant and workable.

Legislative reform - proposals of state significance

In February 1997, the Minister for Urban Affairs and Planning released a white paper and exposure draft bill entitled 'Integrated Development Assessment' for public comment. The paper sets out proposed changes to the laws which regulate development assessment in NSW. A number of the proposed changes will have a significant impact on the assessment of developments of State significance, including coal mining.

Existing mechanisms

There are currently different mechanisms in the EP&A Act which allow the Minister to make decisions on developments which are of State or regional significance and, depending on the trigger mechanism, a different assessment process applies. For example, the section 101 trigger allows the Minister to call in development applications. There are also environmental planning instruments like SEPP 34 which make the Minister the consent authority for certain types of major developments.

The proposed reforms are aimed at providing greater clarification as to which developments are considered to be of State or regional significance, and provide a more consistent approach to the assessment and determination of such developments.

A Clearer System

To relieve confusion and introduce clarity, it is proposed to have in one place in the Act, all the different mechanisms by which the Minister can determine a development of State or regional significance. The powers of the Minister are neither being expanded nor reduced. This reform is basically a rewrite of the present system, more clearly setting out current trigger mechanisms.

It is hoped that in future, the Minister will not need to rely as much on his special power to call in development applications from councils. Instead, the bulk of development requiring the Minister's approval will be identified up front in two ways - by environmental planning instruments (such as the existing SEPP 34 - Major Employment Generating development), and by declarations (which are basically new forms of section 101 directions).

DUAP intends that most of the current Ministerial section 101 Directions will be converted to declarations. The existing direction for new coal mines is likely to be one such example.

Consistent Assessment Process

The assessment process for State significant development will be made more coherent and consistent between triggers. Instead of two different processes, there will be one. This means that the present double handling of applications that happens for section 101 developments will cease, removing unnecessary duplication and increasing efficiency.

For practically all State significant development (including major coal mines), the development application will be lodged directly with the Minister, and the Minister will deal with the application from beginning to end. The Minister will be responsible for placing the application on public exhibition, considering any submissions and will also be able to use Commissioners of Inquiry at his discretion.

By definition, development not identified specifically as State significant development will be local development, which means the consent of normally the local council will be required.

Integration Of Approvals

Under the proposed new system multiple assessment processes will be collapsed into one integrated approval. State Government agencies will provide their requirements at the time of development assessment. This will reduce the need for sequential assessments by different agencies.

The consent authority will issue a consistent set of conditions, known as an integrated development consent, that identifies the requirements of all agencies. An integrated consent will link the approvals required under 16 separate acts including the Heritage Act, the National Parks and Wildlife Act, the Pollution Control Act, the Clean Waters Act, and the Noise Control Act.

Subsequent approvals will remain under the relevant environmental and natural resource control legislation, but they will however be required to be consistent with the relevant outcome conditions specified in the development consent.

Under the current system, if a subsequent licence is refused or incompatible conditions are set by different State agencies, a development approval may be rendered unworkable. To avoid this situation, it is proposed that State agencies will be required to identify key licensing or relevant issues earlier in the development assessment process. This will result in an integrated development consent which sets the terms of environmental outcomes to be achieved in subsequent approvals.

Environmental Issues

Very high standards of environmental management and rehabilitation are now required of all mining operations carried out under mining title in NSW. Although there is a legacy of some historical examples of less than satisfactory mine rehabilitation, the environmental standards generally attained by industry over the last two decades are among the best in the world.

Community perceptions of coal mining particularly in new areas are often negative and these place increasing requirements on the industry to engage in detailed and ongoing consultation with the community at an early stage of development proposals.

As discussed under “Constraining Factors to Growth”, competing land uses in major coal resource areas, together with increased environmental concerns and requirements, make it increasingly difficult for companies to gain access to sufficient recoverable reserves of quality coal to meet future demand. Specifically, these major issues have the potential to delay or “derail” major investment projects, if not addressed early and fully during the development approval process.

The Department of Mineral Resources works with industry and other agencies to raise the overall environmental management standards of mining in NSW. In late 1995, a dedicated Environment Unit was established within the Department to coordinate environmental policy across the Department, provide external liaison, contribute to environmental standard setting, monitor the environmental performance of operating mines and manage rehabilitation of derelict mines.

The Department has a responsibility to ensure that mining is carried out in an environmentally responsible manner and in accordance with environmental management and rehabilitation conditions imposed on mining leases and titles granted under the Mining Act 1992. Key tools in carrying out this responsibility are the "Mining Operations Plans" and "Annual Environmental Management Report". All mining operations in NSW must report annually their performance against their environmental obligations. The Department reviews environmental performance, often with the support of advisory committees drawn from other government agencies and the community.

Inactive coal mines similarly prepare rehabilitation management plans which document care and maintenance, and decommissioning performance.

Security deposits are a key part of the environmental management process. They are designed to cover the estimated cost of mine site rehabilitation and are released on satisfactory completion of rehabilitation. The Department of Mineral Resources is presently reviewing the adequacy of all security deposits and in the past three years a large number have been increased to reflect the current rehabilitation requirements.

The Department currently holds $96.6 million in securities for opencut coal leaseholds and $16.7 million in securities for underground coal leaseholds.

In NSW, security deposits are set and reviewed in accordance with the policies and procedures recommended in the ANZMEC 1995 report "Security Deposit Systems for Minesite Rehabilitation" (Appendix 8). This report was prepared by the Conference of Chief Inspectors of Mines, which is a technical group that reports to ANZMEC.

Security deposits are calculated in NSW by generally applying standard rehabilitation unit cost rates to areas according to the categories of disturbance as outlined in the Department's "MINFACT 26" brochure (Appendix 9). The Department accepts a security deposit in any one of the following forms:

- Security Certificate (in the approved form), being an unconditional performance bond issued by an approved financial institution.
- Cash (for which interest does not accrue to the Department).

An approved security certificate, such as a Bankers Guarantee, may involve additional costs for the mine operator - specifically annual bank administration fees, which are normally charged as a percentage of the total security.

Hunter River Salinity Trading Scheme (HRSTS)

The HRSTS was established in 1995 to manage the discharge of saline waters from coal mines and power stations to the Hunter River. The scheme uses tradeable discharge "credits" (or shares) to ensure that total discharges to the river are controlled on a daily basis to keep the river fresh. The result is lowest cost environmental management for industry, combined with verifiable assurance that discharges will not cause exceedances of water quality objectives. It also means that licences for new mines can be issued without delay, while still providing certainty that cumulative environmental impacts will not increase.

Load-based licensing

The proposed load-based licensing scheme (LBL) will be a major overhaul of the pollution licensing scheme which, being performance based, maximises flexibility for licensees to select their own cost effective compliance strategy. The principles of the scheme are strongly supported by industry, including Australian Business Limited.

Under LBL, "whole-of-premise" control rather than separate controls on each drain or stack leads to better targeted abatement efforts and encourages innovation. The scheme also directly links licence fees to the load of pollutants discharged from the premises. The scheme will provide a commercial advantage for leading improvements in environmental performance.

Innovative regulatory approaches such as these have the potential to achieve environmental objectives at lower cost to Government and to businesses of all sizes.

NSW SUBMISSION TO INDUSTRY COMMISSION INQUIRY INTO THE AUSTRALIAN BLACK COAL INDUSTRY

October 1997

APPENDICES

1. **NSW Coal Industry Profile 1997**

2. **List of Important Coal Projects in NSW**

3. **Effects of Land Use on Coal Resources (Working Party of the Coal Resources Development Committee 1994)**

4. **Future Coal Supply Potential in the Hunter Valley (J Beckett 1996)**

5. **"Longwall mining - is there a future?" (symposium paper by B Mullard & H Bowman 1996)**

6. **Recent and Projected NSW Raw Coal Production (figure)**

7. **Review of Mine Safety in NSW (ACIL Economics & Policy Pty Ltd, 1997)**

8. **Security Deposit Systems for Minesite Rehabilitation" (ANZMEC 1995).**

9. **Security Deposits for Coal Mining Titles and Approvals. (MINFACT 26, 1994)**

10. **NSW Rail Access Regime**

11. **FreightCorp submission**