

AUSINTERMODAL CONFERENCE
SYDNEY 2005

Meeting the demand of growing coal exports:
Supply chain requirements for the coal industry

Presented by -
David Hodgkinson
CHIEF FINANCIAL OFFICER
NSW Minerals Council

On behalf of -
Dr Nicole B Williams
CHIEF EXECUTIVE OFFICER
NSW Minerals Council

1. Coal in the current economic context

Australia is the most successful coal exporting country in the world, exporting some 225mt annually (about 30% of world totals). The industry emerged in parallel with the development of the North Asian steel industry in the 1960's, followed by the development of littoral coal fired power stations in the aftermath of the 1970's oil shocks. These trading relationships remain critical with 83% of Newcastle's exports and 60% of Queensland's exports shipped to just three countries - Japan, Korea and Taiwan¹.



Perhaps echoing these historic economic developments is the more recent 'China' story. There is much talk across the press about a 'super cycle', reflecting the massive investment in infrastructure in China and commensurate insatiable demand for energy and commodity resources. Is this truly a 20 year trend? Certainly, China is cited as being the main driver of the current global economic conditions. CEDA notes that China's GDP has grown by an annual average of 9% since 1980. This strong performance has continued with growth in the first half year to 30 June of 9.5%²

This year alone China will add 68GW of coal fired power capacity (the equivalent of 26 Eraring Power Stations or 1½ times the Australia's total energy generating capacity³) and whilst it produces 1.6bn tonnes of coal per annum, and meets its long term coal export commitments, it has been notably absent in the international thermal coal spot market⁴.

Needless to say, China has become an increasingly important market for resources and energy, and a significant market for Australia's export commodities in competition with our traditional large customers. The knock on impact of these trends can be seen in Australia's export commodity statistics:

- RBA notes increases of 50% or more since mid 2004 of mineral and energy commodity prices

¹ Xstata, Submission to the PM's Infrastructure Taskforce, May 2005

² AFR, Thurs.21 July 2005, World, China springs an economic surprise, p10

³ AFR, Mon.18July 2005, Market Wrap, Commodities, Uranium miners ogle power-mad China, p17

⁴ CEDA, May 2005, Economic Significance of Resources and Energy trade, p44

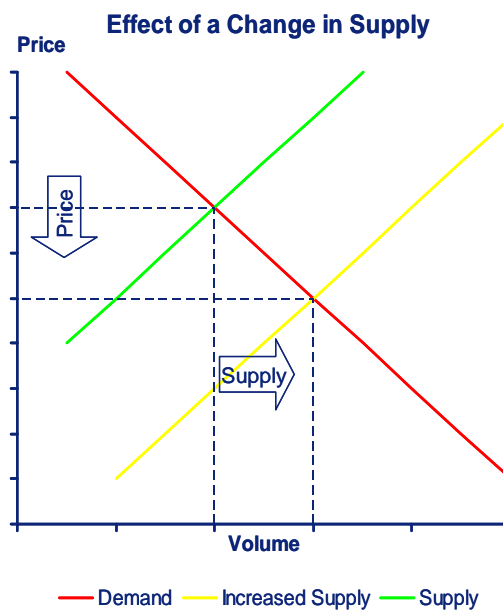
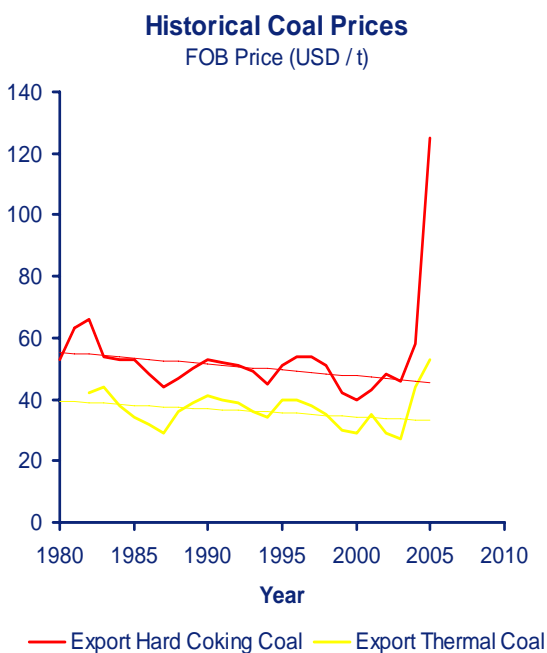
- ABARE forecasts a 23% increase in the (AUD) value of mineral and energy commodity exports this financial year
- ABARE forecasts an overall increase in minerals and energy resource production of 8% this year, and further significant increases in export volumes for some of the mineral and energy export commodities that are important to NSW (coal, copper, gold and zinc).

Of course economic cycles are precisely that. Despite the bullish expectations the laws of demand and supply have not been suspended. The impact of planned volume increases both here and around the world will inevitably reduce prices.

ABARE believes that commodity prices will decline in the medium term, with an easing from 2006. This clearly needs to be reflected in the approach to infrastructure investment. The approach needs to be balanced. Coal producers in NSW have already noted that over-investment has the potential to create an infrastructure investment 'bubble' followed by years of high and inefficient costs, while underinvestment will cap returns to the coal industry and the Australian economy.

Economic 'cycles' are inevitable...

...and reflect the immutable laws of supply & demand



2. The infrastructure challenge

Many of the significant infrastructure challenges facing the NSW mining industry are common across the nation. Issues surrounding infrastructure investment, regulation and strategy are addressed by numerous august bodies such as CEDA, the Productivity Commission, the Business Council of Australia, the Minerals Council of Australia and of course the Federal Government through the AusLink White Paper, and other more recent reviews of infrastructure adequacy.

CEDA draws a clear nexus between economic growth and infrastructure investment. In particular they identify that the roads, water, power, ports and rail infrastructure are in many cases nearing the end of their useful lives. A significant backlog in investment (some \$25bn) has therefore developed.

These core areas of infrastructure (or what the Business Council of Australia calls 'economic infrastructure') are vital industrial inputs to the mining process. The efficient provision of adequate infrastructure ensures that the key NSW export commodities are internationally competitive and can be brought to market on a timely basis taking full advantage of the current economic cycle.

To be more NSW specific, one of the most important infrastructure challenges currently facing the industry is the need for greater rail capacity on the Hunter rail network and export chain to support the increase in demand for coal exports. Indeed recent results from Rio Tinto indicate that available port and rail capacity have continued to constrain export shipments up to June this year. It is this area that will inform much of the paper that follows.

3. The Hunter Export Coal Chain

The coal facilities at the port of Newcastle comprise two separate ship-loading terminals, each of which is connected to the greater Hunter rail network by two tracks. In recent years, as demand on the network has approached or exceeded capacity, bottlenecks have arisen in the network. Some of these are associated with the links between the main coal lines and Kooragang Island Coal Loader, the larger of the two terminals.

Since the Australian Rail Track Corporation (ARTC) has taken responsibility for the Hunter rail network, progress has been made and the NSWMC is hopeful that work at Hexham and Sandgate will remove the worst of these bottlenecks (subject of course to reasonable capital cost). Indications are that ARTC will do better than Rail Infrastructure Corporation, the NSW Government-owned former manager of the Hunter rail network, in implementing these required capital works.

Further, RailCorp is currently in the process of implementing a strategy under which various metropolitan lines are being segregated, to reduce the interdependence of these lines. A separate freight line is also being built from Macarthur to metropolitan intermodal freight terminals. This will reduce the disruption to freight traffic by passenger traffic on the metropolitan rail network.

Equally, whilst coal exports from Port Kembla are smaller than for Newcastle, this port is essential for supply of high value coking coal into export markets. Port capacity is adequate, but transport of coal to the port has a number of issues. Rail paths are limited and there is significant trucking of coal into Port Kembla, which occasions some community concerns (there are also relatively small coal movements by truck in the Hunter). Review of both the rail infrastructure capacity and rail logistics is required to identify inadequacies and assist in the transition of coal from road to rail transport.



Upgrading of major rail networks to the same level of modernity as Australia’s major road network is no less important. Regional and interstate rail has received very little Commonwealth funding for many years, while major interstate and intrastate roads have received considerable funding. As a result the quality of Australia’s rail infrastructure has not kept pace with the quality of its roads. Rail and road compete on a playing field that is far from level. Road transport on major routes enjoys late 20th or 21st century-standard roads, while most major regional and interstate rail networks still has to contend with 19th century alignments and, in some cases, track standards.

4. The benefits and the barriers

Transport on the state’s rail networks is an indispensable element to the NSW coal industry. Currently around 95 million tonnes per year (Mtpy) of NSW coal is exported, valued at over \$6 billion per year at current prices. Of this 85 Mtpy is exported from Newcastle and 10 Mtpy from Port Kembla. Virtually all of this coal is transported to port on regional road and rail networks (the regional road and rail networks are also used to transport other minerals and construction materials, as well as to enable transport of equipment and materials used in the mining and quarrying industry).

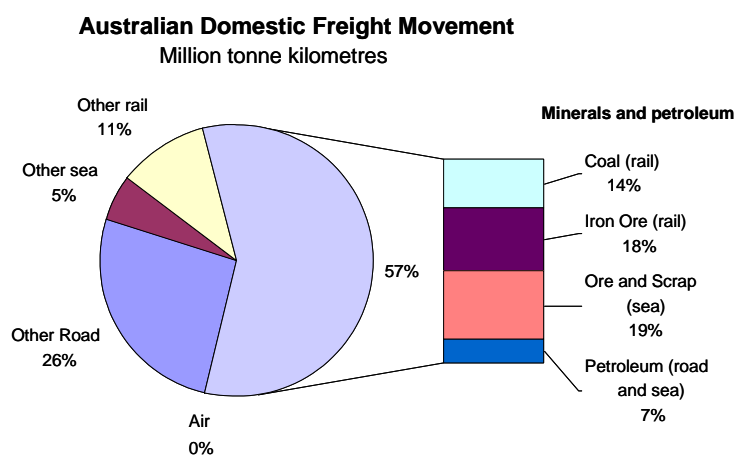
Needless to say, coal is the dominant traffic on much the Hunter rail network and it is charged the full cost of access to that part of the network where it is capable of paying that cost. These charges are regulated to some extent by the Independent Pricing and Regulatory Tribunal of NSW.



It should be noted however that coal competes with all other users of the Hunter rail network, an unusual situation for an export chain (and one that has been largely resolved in Western Australia through significant private investment in dedicated lines for iron ore). Passengers, grain and general freight traffic are a competing priority and have very different operating characteristics. The pattern of operation, comprising such things as operating speeds and frequency of stopping are significantly different for different types of traffic. Non-coal traffic receives higher priority than coal traffic. For these reasons operation of the network is highly complex.

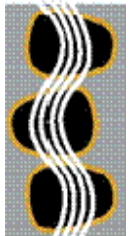
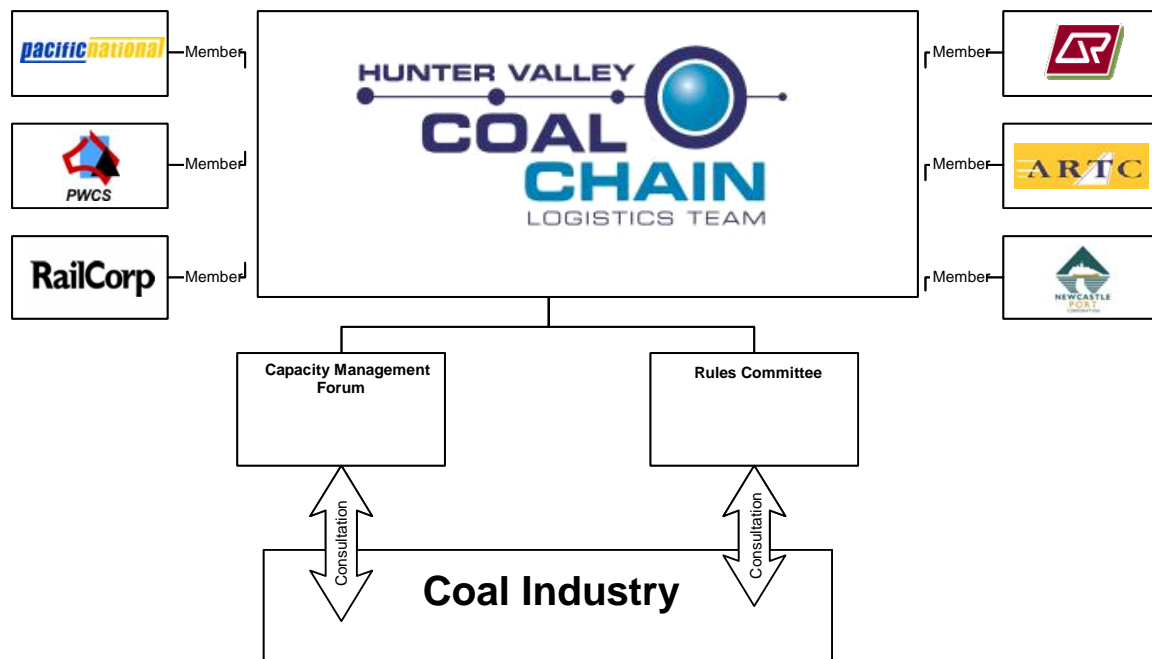
To accommodate the complexity, mine operations, rail and port have to be integrated and harmonised to a large degree.

Nationally the share of rail capacity is as follows:



Source: ABS

A significant effort has therefore been made by all participants in the Hunter coal logistics chain to improve the organisation, planning, management and operation of the chain. Coal export capacity of the Hunter rail network has been increased from around 65Mtpy a few years ago to the 85Mtpy discussed above now through improvements in planning, scheduling and train control and through other organisational means, with little capital expenditure. Credit needs to be given to the Hunter Valley Coal Chain Logistics team that has squeezed these efficiencies through effective logistics management.



Nevertheless nearly all of the gains that can be derived from these types of measures have now been realised, whilst at the same time there is no shortage of analysis that indicates further increases in demand⁵, for instance ABARE forecasts growth in coal exports nationally of approximately 5% per annum. Further improvement in capacity to meet forecast imminent large increases in demand now depends on several urgent capital projects.

5. What needs to be done?

THE PORTS

Newcastle is currently the largest coal export port in the world and the Newcastle Ports Corporation has been effective in providing port capacity. Nevertheless, cape-size ships commonly leave the harbour with less than full loads because of draught constraints and there are restrictions on ship movements at times other than high tide. NSWMC supports NPC's port dredging proposals in general and notes that a number of issues will need to be dealt with to ameliorate any concerns in respect of blasting and disturbance of sediments resulting from historical industrial use.

⁵ See also ARTC, April 2005, Hunter Valley Corridor Capacity Improvement Strategy, p4

Further a major new shiploading facility will soon be required. NSWMC considers that it is essential that potential coal loading at Newcastle is not capped by land constraints and it is important that the necessary land and access corridors be reserved for a potential 'third loading terminal' whoever constructs it, and that its operation is fully integrated into the Hunter logistics network.

In respect of Port Kembla, the connectivity of the regional rail network for coal exports is also complex, but in different ways to Newcastle. All export coal railed from the Southern and Western Coalfields has to pass through the Sydney metropolitan passenger network. Because of the higher-priority demands of passenger traffic, coal trains are severely restricted in the times at which they can traverse the metropolitan network.

Because it represents only a minor proportion of traffic on track it uses, coal railed to Port Kembla pays access charges on a different basis from export coal traffic on the Hunter rail network. Costs of haulage are somewhat greater than for a comparable distance in the Hunter however because of the need to use shorter trains and lighter wagons. Restrictions and disruption of freight movements on the metropolitan network, to avoid interference with passenger traffic, also increase freight haulage costs.

Around 10Mtpy of coal is currently exported through Port Kembla. The capacity of the coal facilities currently exceeds demand by a comfortable margin and plans have been developed to expand the capacity of the coal loading facilities should demand warrant it. Port Kembla also handles a large quantity and variety of other exports.



POLICY

The NSW mining industry has to deal with multiple regimes and bodies in respect of transport infrastructure. There is a compelling need for a single point of contact with State Government and with the managers to ensure that there is effective consultation on strategy and investment.

Equally, policy and other measures that could improve the movement of bulk export commodities include recognition of the potential of a modern rail network to greatly improve the efficiency of Australia's land transport infrastructure.

Realising this requires acknowledgement that for rail to compete on a level playing field with road, the quality of the rail network has to be improved to a standard comparable with that of road standardisation of access regimes, operating standards, safeworking practices and communication will increase the efficiency of rail

Also, in NSW there is a blanket priority given to passenger traffic on rail. Where there is conflict between freight and passenger traffic on rail networks, consideration needs to be given to economic efficiency in determining whether one type of traffic has priority over others. Measures other than blanket priority should also be considered.

Finally, Harmonisation across Australia of rail standards, communications, safeworking and other operational aspects of rail (in a similar manner to that achieved for road) is needed to reduce the costs to rail operators of crossing from one jurisdiction to another. Despite the gains made by ARTC gaining control of the interstate and Hunter networks, these different standards still apply.

Lack of harmonisation of standards and practices constitutes a break of gauge little less disruptive to rail traffic than a break in rail line gauge. Some progress towards resolving this problem has been made in recent years, but much more needs to be done.

STRATEGIC INVESTMENT

One of the greatest problems confronting the transport of coal and minerals in NSW and elsewhere in recent times has been the lack of investment to enable transport and logistics capacity to keep ahead of demand. It has been claimed that the application of National Competition Policy has been a major factor in the lack of investment.

Australia's rail network is a valuable asset that has been allowed to decay for several decades. This network could form the basis of a far more efficient land transport network than currently exists in Australia. To realise its potential, it is necessary to enhance the standard of the interstate and other key regional rail networks to 21st century standards - to the same level of modernity as Australia's major road network. Auslink forms a basis upon which this can proceed, but it needs far greater urgency in upgrading rail to the same standard as the major road network.



One important example of an area where track improvements are needed for the future provision of export coal, which are not covered by Auslink and may not be able to be funded fully by the export coal industry, is on the line from Muswellbrook to the Gunnedah Basin. Development of the Basin is predicated on investment in a number of important projects on the Muswellbrook – Gunnedah rail line. These projects include duplication of tracks on steeper grades, loop extensions to facilitate longer trains, and over the longer term, the re-alignment of rail track on the Liverpool Range to a route which can better accommodate heavy coal carrying trains.

The consolidation of management of the interstate standard gauge and Hunter rail networks has been a good start in overcoming the break of gauge problems that have disrupted Australia's rail network since the 19th century. Much more work is needed however before all the potential benefits of this step can be captured.

When these steps are completed rail will be much better placed to compete with road for the national land transport task. This will result in more efficient use of both road and rail and an overall benefit to Australia's economic efficiency. This is important to the minerals industry because, apart from the export coal industry, other minerals and construction materials are also moved by land transport to and from ports or within the state by road transport. It is essential to these industries that transport is as efficient and economical as possible.

REGULATORY ISSUES

Currently in NSW there is a single regulatory regime for rail access. This will change however when ARTC has an access undertaking approved by the ACCC for its leased rail network in NSW. When that happens, some coal haulage to Newcastle and to Port Kembla will be subject to two different rail access regimes. In addition, different access regimes apply in different states and, in some cases, within states.

The separation of rail infrastructure owner and rail operators has been of benefit to the NSW export coal industry. Bringing infrastructure under the jurisdiction of National Competition Policy and introducing above-rail competition has brought considerable benefits to not just the coal industry but to the rail freight industry as well.

While logistics providers have expressed concerns about the impact of regulatory outcomes, particularly potential for low rates of return, all sides acknowledge the necessity of a reasonable commercial rate of return. The outcome of the IPART review of the ARTC's rate of return on rail investment was to rule that under the NSW Rail Access Undertaking, the remaining mine life from 1 July 2004 is 35 years and the rate of return from 1 July 2004 is 7.3% on a real pre tax basis.

The NSWMC continues to believe that regulation is important in ensuring that there is no reversion to a monopoly rent regime and the Productivity Commission recently proposed ways of addressing the issue⁶.

Equally, ownership and management structure of the Newcastle coal loading terminal has worked well. This involves coal industry ownership and management. It is envisaged that any future coal loading terminals would be owned by bodies with an interest in the coal industry, so that the interests of the coal exporters and coal terminal are aligned. NSWMC considers that it is essential that potential coal loading at Newcastle is not capped by land constraints and it is important that the necessary land and access corridors be reserved for a potential 'third loading terminal' whoever constructs it, and that its operation is fully integrated into the Hunter logistics network.

Finally, the main regulated transport asset in NSW affecting the minerals industry is the Hunter rail network. There is no evidence that any delays in provision of rail infrastructure capacity for NSW coal exports are attributable to regulation per se, although the decision making process has not been rapid.

6. Conclusions

The NSW Minerals Council believes that the problems and opportunities highlighted above have been well known and understood for a number of years and need to be addressed, in some cases they are. Notwithstanding, we believe that NSW cannot afford any delay in making critical investments, particularly on the rail network.

⁶ Review of the National Access Regime, Report No. 17; Review of the National Competition Policy Reforms, Report No. 33

