New South Wales Minerals Council

Board of Surveying & Spatial Information (BOSSI)

The Economic Benefits of the New South Wales Mining Industry to the State

Inaugural BOSSI Conference
University of New South Wales
8 November 2006

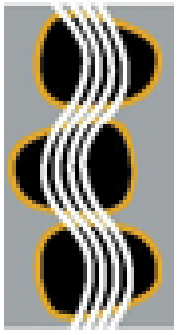


Table of Contents

Introduction and background

NSW has a long and proud mining history. It is a history of continuity and change, of prosperity and struggle. This history both reflects and has shaped the essence of each mining region. Each region and community has its own unique characteristics. Not only are NSW mining communities unique, the industry as a whole differs from the mining sector of every other Australian state. Mining in other Australian states is characterised by geographic remoteness and fly-in fly-out operations. NSW mines, on the other hand, operate in close proximity to many vibrant regional communities. This has both advantages and particular challenges.

However, the common denominator that links them all is the key role that mining plays in the economic success of NSW. Indeed, from the Hunter Valley - through which more than 85 million tonnes of coal is shipped each year helping to power the economies of the developing world; to the Illawarra, with its steel used in the production of everyday household items right up to the family car - the NSW minerals industry makes a remarkable contribution to our lives: every minute of every day.

Mining has played a key role in the development of many NSW regions and will continue to drive regional growth for the foreseeable future. The output of the NSW mining industry in 2004-05 was more than $9 billion, and is estimated to reach $11 billion for 2005-06. This is larger than the State's entire farm sector including wool, crops and livestock. It is still the State's largest single merchandise exporter, worth more than $7 billion a year and the value of taxes and royalties paid by NSW mining companies contribute more than $1.2 billion each year to social infrastructure such as schools and hospitals and hard infrastructure like roads and railways.

Research shows that 5,000 new jobs will be created in mining in regional NSW over the next 10 years. Careers in the NSW industry provide the highest average wages in the State. These same careers also enable a great lifestyle, allowing employees to live by the beach, amongst the vineyards, or the rural expanses of the west, near family and friends. On the flipside, it means that the industry operates under intense scrutiny from the communities within which it operates, and rightly so. Importantly, given the strict regulatory framework within which mining approvals and operations exist, this expansion of the industry (and local, State and National wealth), will not be at the expense of the environment or the communities within which we operate.[1]

In this paper on the "Economic Benefits of the New South Wales Mining Industry to the State", I hope to show you that the mining industry is a vital contributor to the economic and social well being of the State. We do not stand alone, don't get me wrong, NSW is a diverse State with many vibrant industries. It is through this mix of industries, with the mining industry as but one substantial pillar, that we maintain the durability and robustness of our economy, even in the face of shocks and downturns, such as we are facing at the moment in the housing sector.

[1] NSW Minerals Council, State of the Industry 2006, Introduction

The economic contribution of the mining industry is substantial

The commodities boom had come along just in time to save Australia from recession at the end of the housing boom and delivered a massive boost to incomes, wealth and Government revenues[2].

BENEFITS OF A HEALTHY INDUSTRY TO THE STATE

The minerals industry directly accounts for 2 per cent of New South Wales Gross State Product, 75 per cent of which is earned through exports. Those exports are worth over $7 billion per annum, making the sector the largest merchandise exporter. The wealth created employs almost 46,000 people directly, mainly in regional towns and cities, and supports about another 200,000 jobs throughout the State.

In terms of the NSW community, of which the industry is a part, and in particular regional communities, this economic contribution translates into:

- Very well paid employment both directly in mining companies and in the many businesses that service the industry;
- Good profits for shareholders, many of which are superannuation funds that NSW citizens contribute to and will rely on in their retirement;
- Spending by companies and their employees on all the goods and services that are on offer in their communities;
- Direct provision of infrastructure such as some roads and, indirectly through the payment for the services offered, support for other infrastructure such as rail and ports;
- Assisting the State Government to fund hospitals, schools, the police and other services through the payment of over $500 million per annum in mining royalties;
- Items of every day use such as electricity, aluminium cans, household paint, roads and steel in our cars; and
- Participation in the life of the community through clubs, sport and culture, and the sponsorship of operations like the Westpac Rescue Helicopter Service.[3]

WHAT CONSTITUTES THE MINERALS INDUSTRY?

The NSW minerals industry encompasses mineral exploration and mining, and the raw products of mining activities are inputs to the minerals processing industry:

- Exploration involves the search for, and identification of, potential sources of minerals;
- Mining is the process of extracting the minerals that are identified in the minerals exploration stage, with coal mining being the major activity in NSW and metallic minerals, construction materials and industrial minerals mining also significant;
- Minerals processing turns the mined ore into value-added product. The major minerals processing products in NSW include steel and aluminium.

[2] Australian Financial Review, Friday 3 November, pp6-7
[3] ACIL Tasman, Industry Vision, 2006

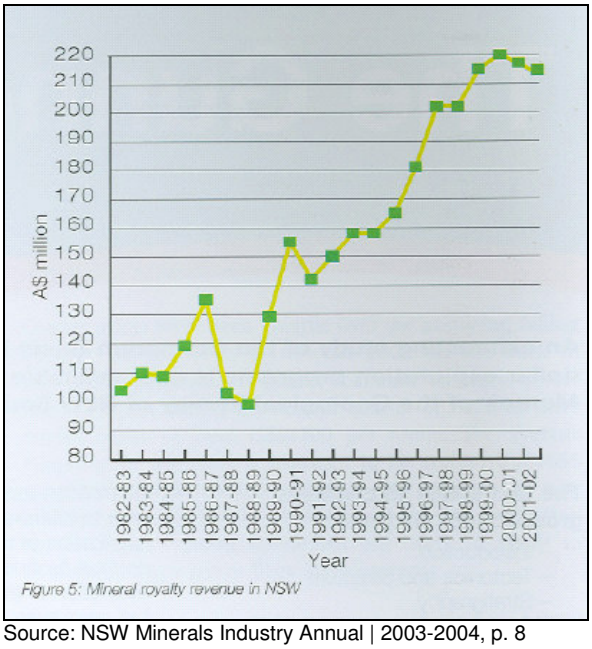
CONTRIBUTION TO STATE REVENUE

The economic benefits to NSW of the current upswing are enormous, and are reflected in the NSW royalty tax take for minerals. Over the decade to 2002, NSW royalty revenue increased by 55%, with coal representing approximately 90% of total mining royalties.

Over the period 2003 to 2004, significant contract price increases have been achieved for many of the State's mineral resources. For instance, contract prices for copper have increased by over 50% since the start of 2003, and the contract price of steaming coal to Asia has almost doubled to $US50 a tonne in the past year[4].

This is perhaps best demonstrated by the following graph of the rise in mining royalty revenue to the state:

Tracking NSW Mining royalties 1992_93 to 2001_02



Source: NSW Minerals Industry Annual | 2003-2004, p. 8

This trend is expected to continue, with an increasing dependence by the NSW State Government on mining royalties as a source of income.

NSW mining royalties, 2003_04 to 2006_07

	2003_04 Royalties ($m)	2004_05 Royalties ($m)	2005-06 Royalties ($m)	2006-07 budget Royalties ($m)
Total Revenue	38,000	39,000	41,000	42,000
Mining Royalties	233	360	485	504
	0.62%	0.93%	1.18%	1.19%

Source: NSW State Budgets 2003_04 to 2006_07

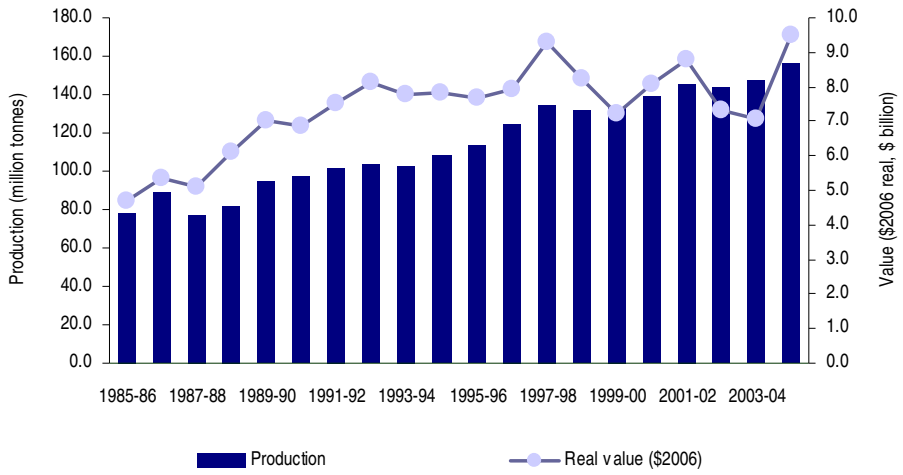
[4] Minerals Council of Australia, Trade and Investment Activity Brief, Quarter 1 2005

MINING PRODUCTION

How is this rise in royalties being fueled? Over the past 20 years, NSW coal and metallic minerals production experienced an average growth rate of approximately 3.75% per year, although that growth rate has slipped to just over 3% in the last 5 years.[5]

The following graph shows NSW coal and metallic minerals production and real value of production since 1985-86

NSW coal and major metallic minerals production (million tonnes) and value (real $2006 billion) – 1986 to 2005



Note: Does not include construction material and industrial minerals, as production data not available for the entire period
Data source: NSW Department of Primary Industries (DPI)

COAL

New South Wales currently exports around 90 million tonnes of coking and thermal coals from the major ports of Newcastle and Port Kembla. The NSW coal industry contributes around 11% of the world's coal trade and supplies over 50 million tonnes of coking and thermal coal to the Japanese power and steel making industries. This is 28% of Japans total coal imports.

Coal production is the largest mining activity in NSW, representing 72% of the value of all minerals produced in the State. Nearly all of the coal in NSW is sourced from the Sydney and Gunnedah Basins. The largest production is from the Hunter region, which produces over 65% of NSW coal. A map of the NSW coal basins is shown at appendix 1

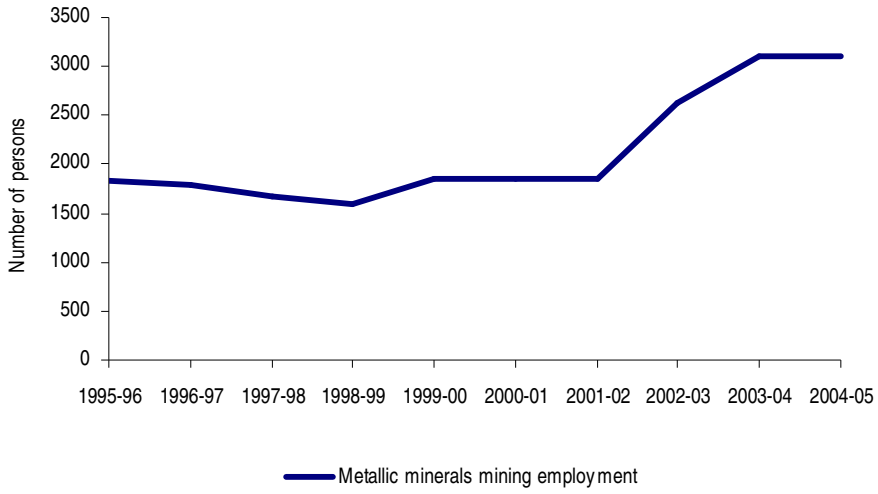
[5] ACIL Tasman, Industry Vision, 2006

THE METALLIFEROUS SECTOR

NSW metallic minerals production includes gold, copper, silver, lead, zinc, tin and nickel-cobalt. Gold and copper are the most significant minerals, representing approximately two-thirds of the production value of all metallic minerals in NSW.

The graph below shows employment in NSW metallic minerals mining from 1995-96 to 2004-05. There is a general trend upwards, with a significant increase occurring from 2002-03, corresponding to increases in gold production with the opening of the Ridgeway mine in 2002-03.

NSW metallic minerals mining employment – 1996 to 2005



Data source: NSW Department of Primary Industries (DPI)

A map of the NSW metal mining and resources is shown at appendix 1

Infrastructure development

INFRASTRUCTURE EXPANSION

Annual exports now exceed AUD7 billion with over 1,000 vessels loaded each year. Approximately 70 per cent of the export coal goes to Japanese power stations, with Taiwan, Korea and Europe also receiving Newcastle coal.

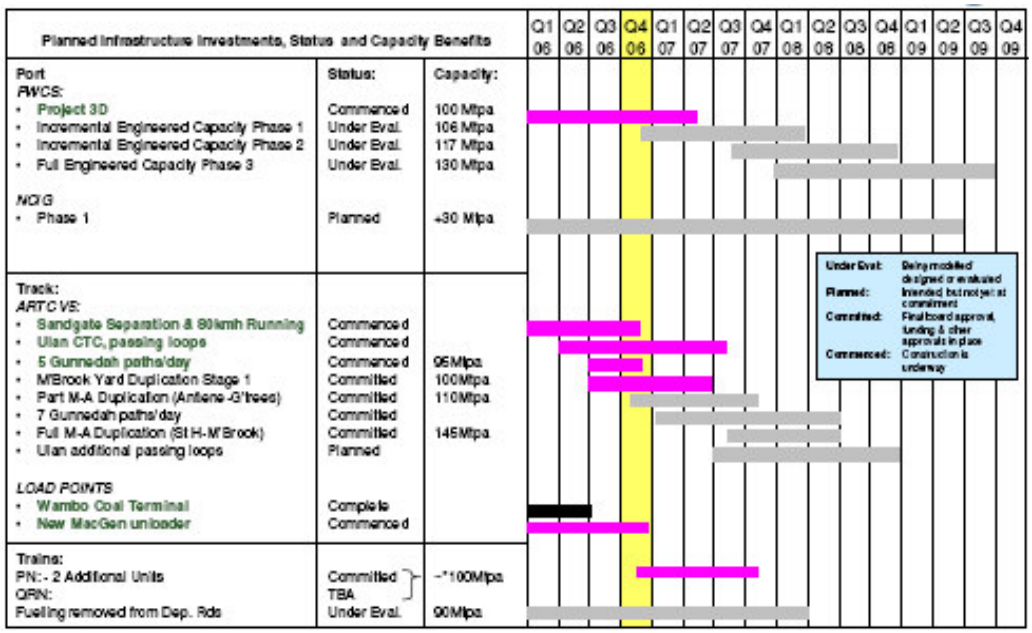
The growth and success of the industry depends on its access to rail and port infrastructure to get the commodities to world markets. The Hunter Valley Coal Chain is the largest coal export operation in the world and consists of 30 coal mines owned by 17 individual coal producers, 23 points for loading coal onto trains, approximately 28 trains making more than two trips per day, more than 80 different export blends of coal, five coal berths and ship loaders and approximately 1.5 million tones of useable stockpile space at the port.

The coal chain stretches from the Hunter Valley to the port and ultimately to overseas customers, and is logistically complex, requiring constant attention to ensure its smooth operation.[6]

CAPITAL INVESTMENT IN AND BY THE MINING INDUSTRY

Plans for this Hunter Coal 'Export Chain' are described in the following table:

Hunter Valley 'Export' Coal Chain Expansion plans

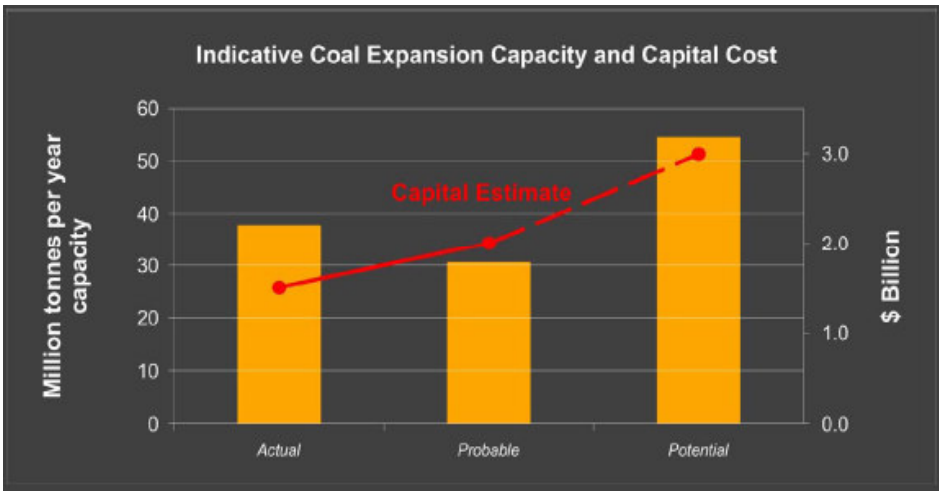


Source: Hunter Valley Coal Chain Logistics Team

[6] NSW Minerals Council, State of the Industry, 2006

These capital plans are based on the needs of the industry, which is forecast to spend approximately $2.3bn on mine expansion in the next few years alone, creating over 1,000 new jobs. This is demonstrated graphically as follows:

Capital costs for the mines



The mine capital costs are based on approximately 108 mtpa of annual export thermal capacity and approximately 17 mtpa of annual export coking capacity. Graphically:

Volume of new production

ENERGY

More than 90 per cent of NSW's electricity supply comes from coal fired power. The world's current and future reliance on coal means that developing our capacity to capture and store the greenhouse emissions from coal fired power plants must be a priority. While alternatives such as energy efficiency initiatives, solar, wind, geothermal and nuclear energy will all play an important part in reducing global greenhouse gas emissions, the problem of climate change will not be solved without a breakthrough in clean coal technology.

The Australian coal industry recently committed $300 million to accelerate the development of clean coal technologies as our contribution to solving the threats posed by climate change.

The COAL21 Fund is a world first, whole-of-industry funding approach to greenhouse gas abatement. It is financed by a voluntary levy on coal production supported by 90 per cent of Australian black coal producers. These funds will provide a major opportunity for NSW to accelerate its transition to a lower emissions future while maintaining affordable energy to power our homes, hospitals, schools and business.

The International Energy Agency estimates that global coal consumption will increase by more than 30 per cent by 2030. Coal is just part of the global increase in all energy sources – gas, oil and renewables, buoyed by the growth of major developing economies like China, India, Taiwan and Korea.[7]

DEVELOPMENT

What has focused significant attention on potential mining in the region was the decision by the NSW Government to invite companies to apply for exploration rights over Caroona, 50kms south east of Gunnedah and 30km northwest of Quirindi, which contains more than 500 million tonnes of potentially mineable, export quality, underground coal. The coal seams in the Caroona area have an estimated worth of $13 billion at current prices. Earlier this year the exploration licence was awarded to BHP Billiton.

While still in the early stages, the project (which if approved would not commence until 2012) has the potential to provide significant employment prospects, community wealth and amenity and the impetus for major upgrades to regional rail infrastructure. Continued exploration, like that happening in Caroona, is vital to the long-term sustainability of the industry.

Across NSW, mining companies spend millions of dollars annually in search of new deposits, bringing major flow-on benefits to the community and employing hundreds of people locally.

The State's coal resources are generally well understood, and exploration in this sector is largely directed to gaining more detailed knowledge of particular deposits to enable mine planning and development. In the case of metalliferous and industrial minerals however, a healthy rate of exploration is essential if new deposits are to be discovered

[7] NSW Minerals Council, State of the Industry, 2006

and evaluated. Major discoveries of mineral deposits are uncommon and typically represent only a small proportion of the total exploration activity in any period. It therefore generally requires a high level of exploration to find significant new deposits and so sustain the growth in the industry.[8]

[8] NSW Minerals Council, State of the Industry, 2006

Community and environment

WORKFORCE

The manpower required by the minerals industry itself and the service industries that it supports, means that it is a significant employer.

The accepted rule of thumb is that for every direct job in the mining industry, there are three to four jobs created locally in supporting industries.

The mining industry alone employs almost 46,000 people directly, mainly in regional towns and cities, and supports about another 200,000 jobs throughout the State. Mining exports also generate many thousands more jobs in some of our largest ports, shipping companies and railway systems and in mining services and equipment. The current resources boom has seen many companies scrambling to ramp up existing operations or fast track new projects to take advantage of high commodity prices. Despite the many thousands of jobs that the industry generates, we are witnessing a chronic shortage of skilled workers to fill the positions.

Mining companies in NSW spend more than $1.5 billion a year on local and regional suppliers, and inject up to $10 million a year to improve local amenities. A NSWMC survey of member companies estimated that around 45 per cent of all mining expenditure is spent in the local town or region and that the majority of employees live in the local area. Many communities owe their continued existence to the industry, which invests heavily in the development and maintenance of infrastructure in regional areas to accommodate the needs of operating workforces and their families.[9]

In order to attract and retain talented employees, the minerals industry is providing excellent opportunities for training and development. Today, all major mining companies operate graduate programs, providing a pathway for successful career development, offered to university students in disciplines related to mining such as engineering, environment and geology. Yet the skills shortages are not limited to specialist minerals graduates. In fact, the largest shortages in the industry in the coming decade are predicted to be in the mechanical and electrical trades.

COMMUNITY

Of course, the economic benefits of a sustainable and profitable mining industry do not simply refer to dollars and cents. NSWMC member companies are striving to go beyond compliance in the way that they engage their local communities. Mines are part of the community – their workforces live, shop, play sport and send their children to school locally.

The NSW minerals industry has long recognised the importance of building sustainable relationships with local communities and the link between the quality of these relationships and operational success. Maintaining good community relations involves an ongoing dialogue with the community, listening to concerns and expectations and

[9] NSW Minerals Council, State of the Industry, 2006

developing an appropriate response to specific social, economic and cultural circumstances.

The NSW planning and approval process requires project proponents to consult with local communities during investigations into the environmental impact and other aspects of proposed projects. This will often take place through Community Consultative Committees (CCC) which are generally required to be established by all major new mines in NSW under the conditions of approval granted by the Minister for Planning.

The purposes of the CCC is to provide a forum for open discussion between representatives of the company, the community, the Council and other stakeholders on issues directly relating to the mine's operations and environmental performance, and to keep the community informed on these matters.[10]

INDIGENOUS COMMUNITIES

NSW mining companies are also very serious about improving communication with local Indigenous communities and encouraging personal and economic development for these groups.

A good example of this commitment is the Working in Partnership program that aims to support and encourage relations between indigenous communities and the minerals industry, promoting long term, effective partnerships. Over the past twelve months, a series of workshops have been held with indigenous communities in the Hunter Valley and Illawarra, as well as the Central and Far West of NSW.

NSWMC has developed a commitment statement of how the industry will work with Indigenous groups in the Upper Hunter in the areas of cultural heritage, environment, economic development, cross cultural communication, capacity building, education and training. Companies are working hard to ensure that these words translate into real long term partnerships.[11]

ENVIRONMENT

The NSW minerals industry now employs more environmental scientists than any other industry in NSW. Air quality, water management, waste and hazardous material management, mine closure planning and biodiversity protection are fundamental aspects in each mining operation's ongoing commitment to responsible environmental management.

Success in the minerals industry does not happen overnight. Planning, seeking approval for and the development of a mine is a long, drawn out process. It's not unusual for a mine proposal to take up to ten years to get from the exploration to the operational stage.

The industry has made significant progress in achieving positive outcomes from good environmental management practices that focus not only on mitigating negative impacts, but improving environmental outcomes. Given their proximity to other land uses such as

[10] NSW Minerals Council, State of the Industry, 2006
[11] NSW Minerals Council, State of the Industry, 2006

farming, and in many regions their proximity to town centres, all mining projects involve detailed planning, completion and monitoring of rehabilitation work.

NSW mining companies are at the forefront of new technologies and have made enormous strides in reducing their impact on the local environment. As environmentally responsible producers, mining operations invest significant resources towards monitoring, reporting and reducing emission levels. Dust control at mine sites is a major issue for companies and is achieved by water sprays on stockpiles and roads.[12]

[12] NSW Minerals Council, State of the Industry 2006

Outlook

Access Economics recently noted that our time in the economic sunshine is running out. The reforms with the largest potential returns were identified as education and training, more labor market reform, water and other infrastructure and cutting red tape.[13]

As in any industry, at any time, there are both significant opportunities to make an investors mouth water, and threats (to make them faint). The aim of this paper however is to provide you with an insight into the economic contribution of the mining industry to our state. In doing so I have shown you some of the drivers of it's success, and I believe that it would be remiss if I did not share, at least in brief, a few of the areas of opportunity and of course threat to the industry over the next few years. In doing so I have taken some of the key messages from the experts:

Strength or opportunity?	Weakness or threat?
Source: The Reserve Bank of Australia, October 2006 Bulletin	
In Australia's case, the resources boom coincided with the housing moderation and helped to dampen it's effects.	After 15 years of more or less continuous expansion we have an economy which is fully employed. There has been approximately zero growth in productivity since the end of 2003.
China has continued to grow with remarkable strength.	Even China must have some limit to how quickly it can grow without causing inflation.
The world economy could be expected to continue growing pretty well during 2007. Japan looks more and more like it is finally escaping the stagnation that followed the excesses of the late 1980's and 1990's.	Demand in the US economy is now growing more slowly than it was a year or two ago.
Australian Financial Review, Friday 3 November, pp6-7	
Strong demand for commodities would continue for many years as China India and other developing countries reclaimed their historical shares of world incomes but commodity prices would inevitably decline as more production came on line. Past attempts to forecast the end of the boom had proved premature and debate would continue about the timing of the downturn.	Resources prices and Australian resource investment would probably remain well above the levels of the last quarter of the past century…but wide fluctuations would pose challenges for economic growth.
Source: Australian coal exports: outlook to 2025 and the role of infrastructure, ABARE research report 06.15, October 2006	
Global black coal consumption is projected to increase by 2.1% a year between 2005 and 2025….much of this growth will be concentrated in the developing ASEAN region, particularly China, India and ASEAN.	To meet projected coal export demand, Australia's coal industry needs surge capacity that takes into account the variability in mine operational capacity caused by maintenance requirements and geological issues such as water or gas seepage.
On the supply side, most of the increase in coal production over the period 2005 – 2025 is projected to occur in China and India.	NSW has 16bn tones of recoverable economic demonstrated resource (EDR). Putting this into perspective, China is the largest coal producer, with an estimated 114 bn tones of proved coal reserves at the end of 2004.

[13] Australian Financial Review, Friday 3 November, pp6-7

Australia's coal exports are projected to rise at an average annual rate of 2.7% over the period 2005 – 2025..Australia is projected to increase its share of the traded global coal market to 36% in 2025, up from 30% in 2005. ABARE note that most of Australia's increase will come from thermal coal.

Australia is the world's largest exporter of black coal, representing a third of world trade. Total Australian coal exports were valued at $24.5bn in 2005_06, which represents 20% of Australia's total commodity exports. This share is expected to increase at least in the short run.

Australia and Indonesia have a distinct competitive advantage in exporting thermal coal to the rapidly growing areas of the Asian region, largely as a result of lower freight costs.

While Australia is well placed to expand its market share, it could also face increasing competitive pressures in the global thermal coal market, particularly from Indonesia and China.

On skilled human resources: Even a temporary shortage in skills can negatively affect the competitiveness of Australia's coal exports in the longer term…in particular through cost inflation.

Concluding remarks

Today the mining industry faces greater challenges than ever before.

Its recent growth has exposed and exacerbated enormous skills shortages across our economy; an imbalanced supply chain resulting in equipment shortfalls; along with both soft and hard infrastructure constraints: particularly schools, hospitals, public amenity, telecommunications, water, electricity under capacity, roads, rail and ports.

As miners try desperately to meet the growing demands of industrialising Asian economies, particularly China and India, these constraints will become increasingly significant and will require concerted, constructive and creative responses from all stakeholders.

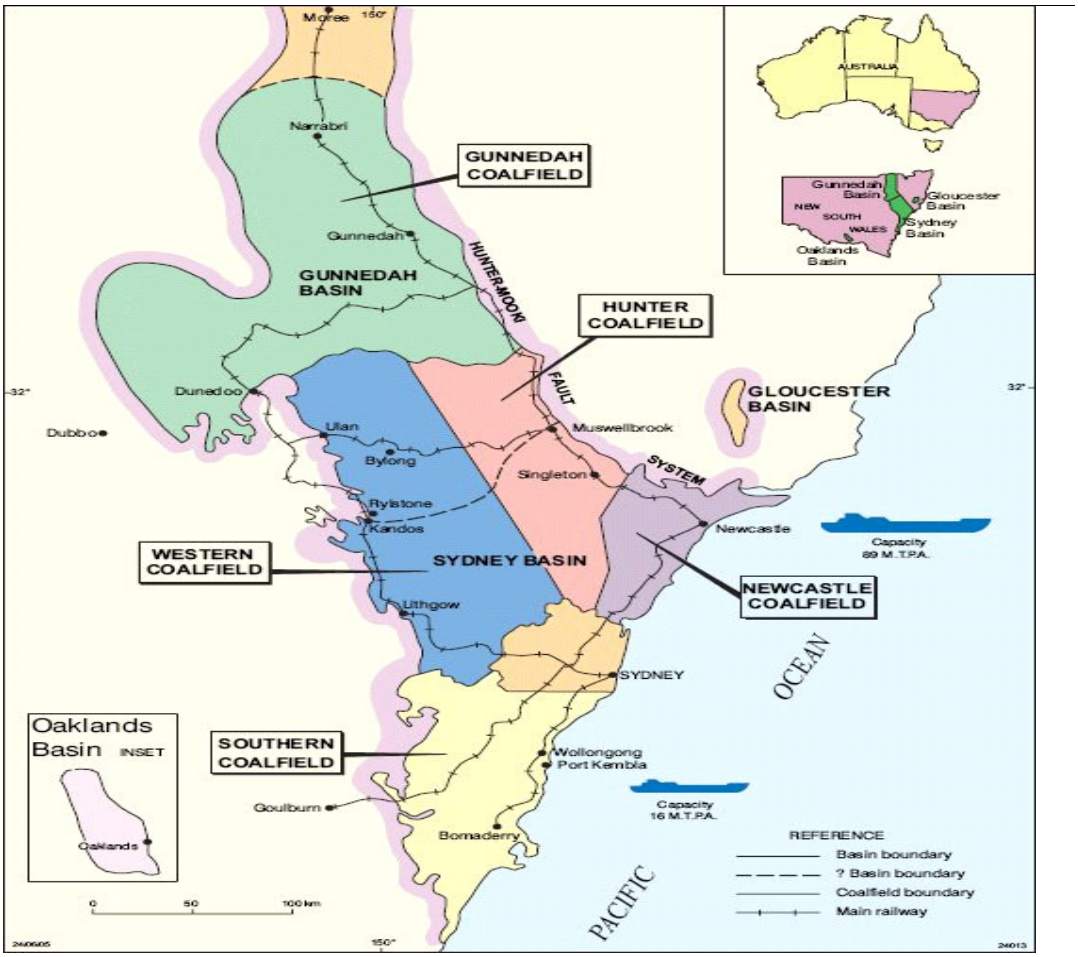
Whilst as an industry, we talk about our contribution to the economy and the jobs created, we acknowledge that we will always be judged by our worst performer. We conscientiously work to promote the best practice of today in order that it becomes the minimum standard of tomorrow.[14]

Thank you for your time

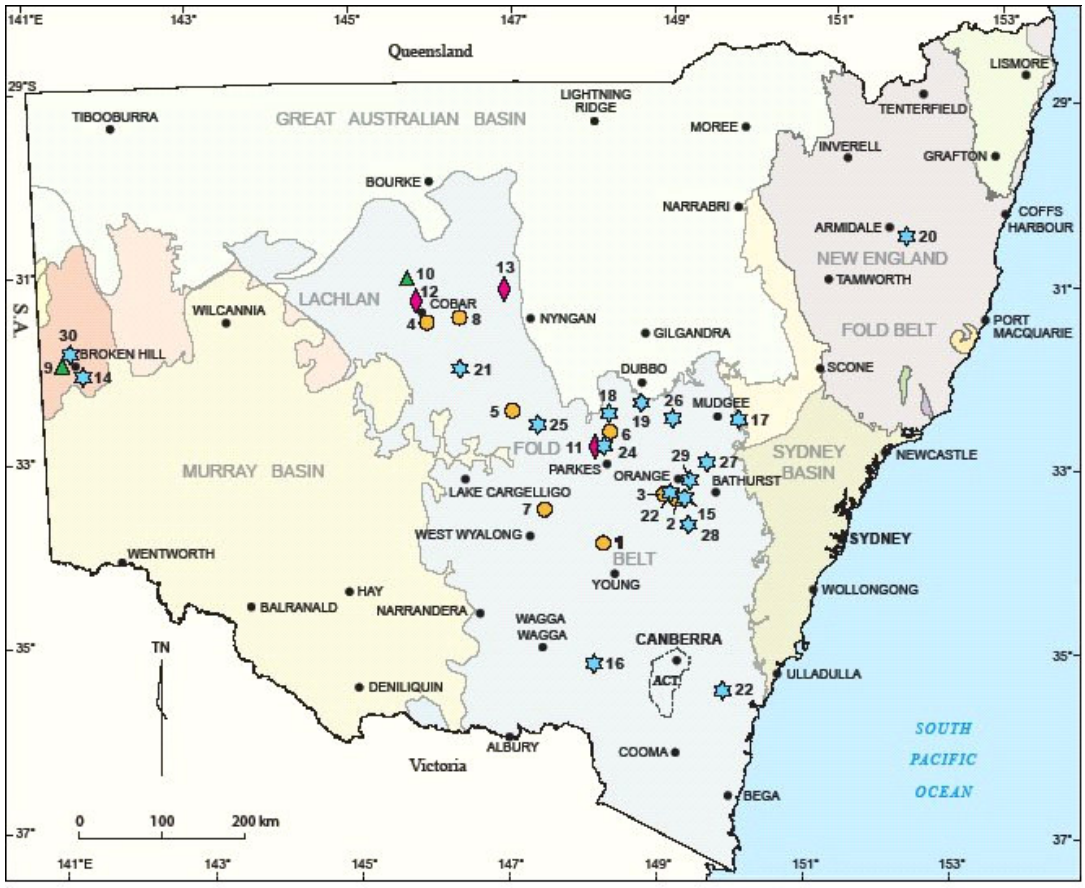
[14] Dr Nicole B Williams, State of the Industry Report 2006

Appendix

Map of NSW coalfields



Map of NSW major metallic mines and deposits



MINES

GOLD
1 Broula King
2 Cadia Hill
3 Ridgeway
4 The Peak
5 Mineral Hill
6 Peak Hill
7 Cowal
8 Canbelego (Mt Boppy)

SILVER-LEAD-ZINC
9 Broken Hill
10 Endeavor

COPPER
11 Northparkes
12 CSA
13 Tritton

MAJOR PROJECTS

METALS
14 CML 7 (Pb, Zn, Ag)
15 Cadia East (Cu, Au)
16 Adelong (Au)
17 Bowdens (Ag)
18 Wyoming (Au)
19 Dubbo (Zr)
20 Hillgrove (Au, Sb)
21 Hera (Au, Zn, Pb, Cu)
22 Dargues Reef (Au)
23 Ridgeway Deeps (Au, Cu)
24 Northparkes E48
25 Syerston (Ni, Co)
26 Galwadgere (Au, Cu)
27 Hill End (Au)
28 Kempfield (Ag)
29 Lewis Ponds (Zn, Pb, Cu, Ag, Au)
30 Potosi (Pb, Zn, Ag)

The New South Wales Minerals Council

The NSW Minerals Council is a tax exempt public company limited by Guarantee. It was established on 27th April 1995, replacing the NSW Colliery Proprietors Association Limited.

An Executive Committee is responsible for the development of policy and the management of the affairs of the NSW Minerals Council. The Executive Committee is comprised of the chief executive officer of the NSW Minerals Council, twenty executives of mining companies that make up the ordinary membership, and representatives from the 'associate' membership who are invited to attend Executive Committee meetings.

The NSW Minerals Board is elected by the Executive Committee and is comprised of the Chairman of the Executive Committee (and thus the Board), the chief executive officer of the NSW Minerals Council, and three non executive directors.

The NSW Minerals Council's activities are coordinated and managed through a number of committees, working groups and task forces. There are five key committees which report to the Executive Committee: Infrastructure, Environment and Development, Exploration & Resource Access, Occupational Health and Safety and the Coal Committee.

Numerous subcommittees and taskforces are established as specific needs arise.

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