Freightcorp

SUBMISSION TO
INDUSTRY COMMISSION

INQUIRY INTO THE
AUSTRALIAN
BLACK COAL INDUSTRY

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***Overview***

Freightcorp is the largest standard gauge rail freight operator in Australia.

Freightcorp has as its direction statement, an aim to:

*"succeed as a profitable freight services company in a competitive environment through pursuit*

*of*

*~ Quality Service*

*· Business Growth, and*

*~ Operational Efficiency*

freightcorp was established as a State Owned Corporation on 1 July 1996. It has a commercial
charter and a commercial Board. Achievements in the twelve months since corporatisation include

· a record tonnage of 72.6 million, an increase of 8.8 million tonnes over 1995/96,

· revenue exceeding $800 million,

· operations covering 12 billion net tonne kilometres

· finalisation of its capital structure - giving it the necessary balance sheet strength to look for opportunities in the ever changing transport environment,

· certification of its first Enterprise Agreement which provides the workplace reform essential to deliver lower freight rates and service quality improvements,

· a joint venture agreement to haul the first privately owned coal wagons in the Hunter Valley,

· development of performance based contracts with customers,

· a reduction in staff from 4,000 to 3,500, and

· productivity improvements across all areas of the business: =' loco productivity up by 26% =' wagon productivity up by 21% =' employee productivity up by 31%.

***Operating Environment***
FreightCorp's success over the past twelve months has been against a backdrop of the most significant restructure of the NSW rail industry in its 140 year history. The introduction of National Competition Policy has led to the separation of above and below rail operations in NSW and the introduction of an open access regime.

Rail Access Corporation (RAC) is now responsible for below rail-head activities and for managing
access to the network as owner of the track infrastructure. The associated functions of maintenance
and train control are contracted to the Railway Services Authority and Network Control (a division

This function is progressively being made contestable of the State Rail Authority (SRA). Operators such as freightcorp are concerned only with above rail services. Operators negotiate access contracts and charges with the access provider (RAC) for operation of these services on the network.

Figure 1 illustrates the new operating environment, in which freightcorp provides a full transport service to the coal client.

**Figure 1**

Beyond this industry restructure and the introduction of open access, the current environment is characterised by

· competition,

· privatisation - Australian National, National Rail Corporation, V/Line Freight,

· reviews of land transport policies. A recent National Rail Summit was held at which Australia's Transport Ministers addressed issues affecting rail and resolved to standardise aspects of the interstate rail network. A House of Representatives Committee inquiry is currently being undertaken into the role of rail in the national transport network,

· Government expectations of further efficiencies, (NSW Government is seeking higher dividends as shareholder and lower community service obligations as Treasurer), and

· customer demands for lower freight rates.

FreightCorp's RELATIONSHIP WITH THE COAL INDUSTRY

FreightCorp hauled a total of 58.7 million tonnes of coal in 1996/97. Of the total coal hauled, 57.4 million tonnes was for export. Export coal is FreightCorp's largest business and represents 79% of FreightCorp's total tonnage. 1996/97 saw a 12% increase in export coal tonnage over the previous year.

FreightCorp is by any standards a skilled and experienced haulier of export coal.

Of the 57.4 million tonnes of export coal hauled in 1996/97, over 50 million tonnes was Hunter Valley coal delivered to the Port of Newcastle.

Since 1988/89, rail delivered export coal tonnages within New South Wales have grown at an average annual rate of 8%, from 31.5 to 57.4 million tonnes. During this period the transport task to Port Kembla has remained little changed. The increase in volume has been drawn largely from the central Hunter Valley and exported through Port Waratah Coal Services (PWCS) terminals within the Port of Newcastle, as shown in figure 2.

**NSW Export Coal Haulage by Rail**

**Figure 2**

While the importance of the Southern and Western coal operation is recognised, the predominance of the Hunter Valley region as a source of coal means that a significant proportion of FreightCorp's

resources and operating focus are directed here. This is reflected in the nature and location of many of the initiatives outlined below.

The major challenge facing the coal industry over the next few years will be to capitalise on the strong growth in its export markets. This will require the industry and its service providers, including FreightCorp, to maximise the performance of each component in the delivery system from coal producer to consumer and to carefully target capital expenditure on further system expansion.

FreightCorp has implemented and continues to pursue a series of initiatives to significantly improve its service to the coal industry. This has included:

*Performance Incentives*

In the former rail operating environment rebate arrangements were introduced into contracts to encourage the development of efficient loading facilities. In 1987 a "Category 5" loading facility was the most efficient facility. This was the development route chosen by most coal companies within the Hunter Valley. These facilities were required to comply with certain operational parameters and to have an ability to:

· load trains 24 hours a day 7 days a week,

· load a 6,400 tonne train at a rate of 3,200 tonnes per hour, and

· load successive trains with a headway of 140 minutes between trains.

Significant rebates were provided which reflected the quality of the loading terminal, the quantity of coal shipped through a terminal and the distance to the port.

A "Category 6" terminal specification was then developed in conjunction with the coal industry. A "Category 6" terminal sought a faster loading rate, stipulated a high level of accuracy, (+ 0.5 tonne/wagon), and required derailment detection equipment at the loading point.

This led to the development of coal loading terminals which were comparable with efficient operations in North America. The "Category 6" specification introduced for the first time a direct performance component. Agreed performance indicators were monitored by FreightCorp (or Freight Rail) and clients on a regular basis in applying an incentive/penalty system for performance at the interface.

FreightCorp is now pursuing with its clients a broadening of the performance component in the freight rate to encourage system efficient behaviour by all parties at loading terminals. Individual contracts may include but are not restricted to

· consistency in loading performance,

· accuracy of loading,

· train scheduling,

· notification of train arrival, and

· profile of train demand.

This approach is far more commercial than was previously the case and the agreements now being negotiated are performance based with outcomes which reflect commitments by both parties.

*Operational Efficiency Initiatives*

FreightCorp is pursuing a number of significant initiatives designed to improve both the operation of its own fleet and its interface with its clients and with Port Waratah Coal Services (PWCS).

**(i) Automatic Equipment Identification**

Automatic Equipment Identification (AEI) involves the "electronic tagging" of all wagons and locomotives within a fleet. Each unit of rolling stock has an electronic tag attached which contains information about that particular wagon or locomotive.

FreightCorp is implementing an AEI system in the Hunter Valley which is operated by major coal hauliers within North America. Strategically placed readers on the approaches to the PWCS Carrington/Kooragang Terminals and respective dump stations will enable information to be collected by both FreightCorp and PWCS on the arrival sequence of trains and the identification of those trains prior to placement at the coal receival facilities.

This will enable:

· stockyard equipment to be positioned in advance,

· delays at receival facilities to be reduced, and

· overall utilisation of the rail fleet and stockyard to be improved.

Installation of similar readers at loading terminals will assist both FreightCorp and its clients in overall performance monitoring which, as mentioned earlier, is becoming an increasingly important part of the commercial relationship between FreightCorp and its clients.

**(ii) Hunter Valley Coal Operations System**

Twelve months ago FreightCorp embarked on a major re-engineering of its operations within the Hunter Valley. The objective was to develop and implement a number of planning sub-systems which would strengthen FreightCorp's ability to meet its clients needs, improve rolling stock utilisation and maintain a competitive edge. These systems are now coming on line and include a strategic planning model capable of modelling the rail operations within the Hunter Valley.

This tool provides FreightCorp with the means of:

· examining and assessing any emerging constraints in the rail infrastructure,

· testing various approaches to train scheduling, and

· analysing the cost of operational initiatives.

A train scheduling and planning system is currently under development and due to be implemented in December. This will enable operational staff to more swiftly test scheduling options before finalising the train programmes for coal deliveries. When combined with PWCS' computer aided transport scheduling system which provides ship arrival times and stockpile availability information, this will improve the overall efficiency of the planning interface between FreightCorp and PWCS.

**(iii) Global Positioning System**

FreightCorp has also implemented a global positioning facility which facilitates the tracking of coal trains through the Hunter Valley network. This allows FreightCorp to pursue more efficient utilisation of its rolling stock and to gather better operational data which can be used in performance measurement, maintenance and planning. The global positioning system complements the AEI system.

* * *

Using the above range of information tools, FreightCorp is seeking to:

· improve its equipment utilisation,

· increase system capacity without major capital expense,

· provide opportunities for further reductions in haulage charges, and

· enhance its ability to provide up-to-date information to both clients and PWCS on train schedules and actual operations.

*Interface Improvement*

**(i) FreightCorp/PWCS Interface**

By far the most critical interface in the overall coal chain is between FreightCorp and PWCS. All coal shipped out of the Port of Newcastle must at some stage be received into the PWCS facilities. The NSW export coal terminals operate on the basis of cargo assembly. Port stockpiles are small by comparison with annual stock turnover and the system requires close co-ordination between PWCS and FreightCorp to assemble cargoes to meet individual shipping arrivals. At any given time, 20 or more individual cargoes are being assembled within the PWCS stockyards. Sub-optimal performance at this interface will impact on total system throughput.

A number of key time frames have been identified in terms of interface co-ordination and can be broadly grouped into three categories:

· Strategic Capacity Planning (6 months-5 years)

At this level, developing market trends and the time frames associated with the investment in critical capacity enhancements come into play.

· Strategic Operations (3 months to 12 months)

Account needs to be taken here of planned maintenance outages of stockyard equipment, loading terminals or fixed rail infrastructure. These are planned many months in advance to minimise system impact.

· Transport Scheduling (0 to 4 weeks)

Planning must consider forecast shipping arrivals, stockpile and coal availability in developing a rail schedule which will meet clients' needs and assembling the coal within the port ahead of ship loading. As mentioned in the previous section, FreightCorp is pursuing operational initiatives aimed at improving this function.

In recent months PWCS and FreightCorp have developed an interface agreement to manage this process and satisfy a range of operational protocols. It contains key performance measures intended

to provide essential incentives/penalties to encourage improved performance at the interface, and maximise receivals of coal within the port which are consistent with the investment in both port receival capacity and haulage fleet capacity.

**(ii) Client/FreightCorp Interface**

FreightCorp has recently undertaken an extensive survey of its clients. The results of this survey are being used as the cornerstone for its internal Quality Program. The service areas which were identified by clients as requiring attention are now being addressed and are the focus of the reform program already underway.

FreightCorp develops, in discussion/negotiation with clients, individual price service packages that

meet the particular needs of that client. Some factors that are considered and addressed in these arrangements are:

· service reliability (on-time placement),

· wagon mix,

· loading rate,

· acceptance of trains, and

· volume and distance.

These factors when combined, form part of the price negotiation between FreightCorp and its clients. In some cases, these factors are linked to a key performance indicator (KPI) structure within the price service package. The freight rate applied for a particular period can then vary depending on achievement of set standards by either party as measured by the KPIs.

FreightCorp undertakes regular meetings with its clients to address both business and operational service delivery issues. These meetings examine the performance of both parties on a regular basis and facilitate joint development of better train operations which will achieve efficiency gains.

*Satisfying Demand - Capacity and Market Growth*

**(i) Background**

FreightCorp and PWCS have worked closely over the years in assessing demand requirements and developing expansion plans in step with industry forecast demand.

FreightCorp recognises that its success in the Hunter Valley in the longer term will depend on its capacity to match industry capacity and pricing expectations. The increasing volumes of export coal reflect the growing, global demand for energy, particularly the North East Asian markets of Japan, South Korea and Taiwan. The strength of Hunter Valley exports within these markets is a function

of coal quality, reliability of supply and consistency of product. To satisfy the growth in demand, existing mines have expanded and new mines have been developed. Over the past few years significant investment in new operations has taken place including the Dartbrook, Bayswater No 3, Mt Owen, Stratford and South Bulga Opencut & Underground mines. All of these mines use rail for delivery to the Port.

The recently completed Ravensworth Coal Terminal in the upper Hunter Valley is a rail loading terminal handling coal, previously road hauled from the Bayswater, Cumnock and Muswellbrook Mines, Its development has led to a modal shift in favour of rail. Of all coal deliveries to the Port of Newcastle, rail now has a market share of over 93%.

The strongest growth to date has been experienced in the past twelve months with rail based coal deliveries to PWCS growing by 12% from 44.6 million tonnes in 1995/96 to 50.4 million tonnes in 1996/97.

Since January 1997 through to the current quarter, new records have been set with sustained rail deliveries exceeding 14 million tonnes per quarter and an annualised rate of delivery currently in excess of 60 million tonnes per annum. The growth in the past 9 months has been driven by higher production levels at mines, the modal shift to rail, and increasing levels of demand by coal consumers. Figure 3 illustrates the rail deliveries to date this year.

Weekly Rail Deliveries to Port of Newcastle
January - August 1997

**Figure 3**

**(ii) Fleet Expansion**

Applying conservative utilisation factors to fleet performance, the existing Hunter Valley coal haulage fleet has an annualised achievable capacity of 66 million tonnes; equal to the current nameplate capacity of PWCS.

FreightCorp has embarked on a programme of fleet acquisition. It has acquired a total of approximately 800 x 97 tonne capacity wagons to complement its existing fleet of 900 x 76 tonne capacity wagons. In terms of locomotives, 29 x 4000HP "90 class" are dedicated to the Hunter Valley while a further 55 x 3000HP "82 class" locomotives are used for coal and other traffic. At present 25 are assigned to the Hunter Valley, 4 are used in other traffic and 26 were until recently on hire to National Rail Corporation (NRC). With NRC'S own locomotive acquisition program now well underway, these locomotives are returning to the FreightCorp fleet and will be largely deployed in the Hunter Valley in step with the delivery of the new wagons.

FreightCorp has revised its capacity plan for the Hunter Valley so that by September 1998, per annum capacity will stand at a minimum of 79 million tonnes per annum. When combined with minor improvements in overall system wide performance, this new fleet will then have a capacity to haul 85 million tonnes per annum. This fleet acquisition and improved utilisation will position FreightCorp to meet market demand well after the year 2000.

Further expansion of the fleet is currently being considered and will be predicated on market growth projections and FreightCorp's own expectations of being able to retain its position as the preeminent haulier of coal within the Hunter Valley.

Supporting the wagon fleet are modern maintenance facilities and a modern locomotive fleet.

**(iii) Fleet Maintenance**

FreightCorp has an extremely efficient system of fleet maintenance which is based on a preventative maintenance cycle at both train and wagon level. FreightCorp's One Spot Wagon Maintenance Centre at Port Waratah has instituted cyclic periodic maintenance on wagons which requires each coal wagon to be scheduled through the maintenance centre once every three years. The wagon maintenance procedures within the shop have been quality accredited to ISO 9002 and the entire Hunter Valley coal fleet along with all other wagons operating in the northern region of NSW, totalling some 4,000 wagons, is maintained by 26 multi-skilled staff.

**(iv) Locomotive Maintenance**

Locomotives for the Hunter Valley are provided under a 15 year "ready power" contract with Clyde-EMD. All maintenance beyond what could be termed service station level (fuelling, sanding and lube oil) is carried out by Clyde-EMD at a purpose built facility on Kooragang Island. The contract requires a stipulated number of locomotives to be available on a daily basis.

*An **Historical Perspective***

The average export coal freight rate in NSW has declined in real terms since 1992/93 largely in line with the declining trend of average Free on Board (FOB) prices of all coal types.

Figure 4

NSW Coal Exports
Average FOB Prices vs Average Rail Freight Rate

*Sources: 1997 NSW Coal Industry Profile (pp 229),*
*Australian Bureau of Statistics, Monthly Summary of Statistics,*
*January 1997 (pp 17)*

The reduction in freight rates, representing a sharing of FreightCorp's efficiency gains with the coal industry has been factored into current and emerging freight rate contracts. FreightCorp's efficiency gains result from more efficient train operations, introduction of new technology and better rolling stock and workplace reform.

***International Comparison***

North American railroad practice is often cited as the benchmark for international best practice due to its highly competitive nature. Coal railroads in North America adopt commercial pricing principles, with most coal freight rates negotiated in confidential contracts. As outlined in Booz Allen (1991), there are two rules generally followed in setting coal freight rates:

(i) rates are market-based, that is, they allow shippers to deliver their products at a cost commensurate with or below that of the shippers' competition; and

(ii) rates at least cover variable costs.

FreightCorp's pricing principles are broadly similar with additional emphasis on providing rebates for improved loading terminal performance. Due to the longer average hauls in the US and the relatively less expensive capital, there is generally not

the same emphasis on loading terminal performance by US railroads as there is in the Australian environment

*Coal Freight Rate Competition*

Clearly, comparisons of rail freight rates cannot be meaningfully undertaken in isolation of the myriad of other factors which influence, firstly, the nature of the rail service being offered and, secondly, the delivered price of coal.

Nevertheless, a number of studies have attempted to draw conclusions from direct comparisons of rail freight rates. Figure 5 illustrates a comparison of NSW freight rates and US rates across a range of haul distances on a dollar per tonne basis.

**Export Coal Transport Costs**
**US v Aus (NSW) Freight Rates**

**Figure** 5
*Sources: Fieldston Coal Transportation Manual 1996/97*

*(US rates are for 1992-1995, NSW rates are for 1996/97, before monopoly rent taken out)*
As can be seen, actual rates are significantly scattered around the regression line but in general, NSW rates are higher than comparative US rates. However, the existing gap between NSW and US rates will close considerably with the phasing out of monopoly rents which will continue in New South
Wales over the next three years. The monopoly rent component of coal freight rates is currently

captured by RAC. As this component is phased out, freight rates charged to customers will reduce as illustrated in Figure 6. An adjustment has already been made for 25% of the monopoly rent which was passed on to the coal industry on 1 July 1997. In addition, the significant reform programme being implemented by FreightCorp over the next two years combined with the emergence of competitive service providers will further reduce freight rates.

**Figure** 6

Despite the difficulties associated with direct comparisons of rail freight rates, it is interesting to note the impact that the level of rail freight rates exert on the competitiveness of Australian coal producers on world markets. Table 1 provides estimates of rail freight costs as a proportion of the value of coal for NSW and other major coal exporting regions. In NSW, rail freight is a smaller proportion of the FOB price compared to all except the US Gulf region (which is on a par with NSW). As outlined above, production and shipping costs will also impact significantly on the delivered price of the coal.

TABLE 1: RAIL FREIGHT COSTS AS A PERCENTAGE

OF EXPORT COAL FOB VALUE

*Access Pricing*

**(i) Negotiations**

FreightCorp has recently concluded negotiations with the Rail Access Corporation over 1997/98 access charges that will save Hunter Valley Producers over $20 million this year.

Success in these access negotiations, coupled with FreightCorp's recent ongoing efficiency gains, means total freight charges in the Hunter Valley will have reduced bv 25% in the Past two years.

**(ii) Infrastructure Ownership and Investment**

Beyond the issue of access pricing, the new rail environment also introduces the challenge of asset management. In the environment of a vertically integrated railway, above and below rail activities were managed by a single rail entity. The separation of above and below functions (as shown in figure 1) has resulted in a situation where several entities carry varying degrees of responsibility. These entities are each driven bv different commercial objectives and business directions.

Within this environment, the efficient operation of the network and of the coal chain is dependent on having appropriate contracts and planning arrangements in place. In the multi operator environment, it is incumbent on the infrastructure owner to ensure that industry growth is catered for by undertaking infrastructure renewal and/or upgrading.

Additionally, FreightCorp believes that infrastructure investment is an area which requires attention within the scope of a land transport policy. This would remove the impediment created by the need for the infrastructure owner to receive a commercial rate of return and would address the current huge imbalance in road and rail infrastructure funding .

In summary, the volume growth anticipated in the coal industry, will allow both FreightCorp and the Rail Access Corporation to reduce unit rates and achieve cost efficiencies that can be shared with coal producers.

In addition, FreightCorp is proceeding with the industry to identify a number of principles for the operation of the Coal Chain to further improve efficiency.

FreightCorp is also accelerating its reform programme to achieve operational efficiencies and cost reductions as outlined in the following section.

FREIGHTCORP FUTURE EFFICIENCY DIRECTIONS

*FreightCorp Productivity Improvements and Cost Reductions*

FreightCorp recognises that in the current environment, if it wishes to remain the preferred rail operator for the coal industry it must:

· further reduce costs,

· reduce prices to customers, and

· improve the efficiency and reliability of its operations.

FreightCorp is in continuous contact with its customers and is focusing its reform program on the areas which require attention.

FreightCorp's first enterprise agreement is delivering workplace reforms including the trialing of driver only operations within the next six months. A saving of over $10 million is being targeted through a review and reduction of the corporation's overhead costs. This will involve rationalisation

of the white collar workforce. Reforms will continue in the fleet maintenance and terminals areas to further improve productivity.

FreightCorp will be accelerating its reform programs so that there will be a 25 percent reduction in operating costs over the next two years. These efficiency gains will be reflected in the pricing structure offered to export coal clients.

*Integration of the Coal Chain*

(i) Background

To accommodate the demands of the market and the system interactions involved in meeting these demands, the concept of a Hunter Valley Coal Chain (HVCC) evolved.

The HVCC is by any standard a complex system within which the participants including the mines, FreightCorp, PWCS and the Newcastle Port Corporation co-operate and co-ordinate activities to ensure coal is transported to the Port of Newcastle and a vessel is loaded and departs in accordance with an agreed schedule.

The system requires the timely supply of data to the relevant participants on a host of key variables which include a vessel's expected time of arrival, cargo composition, coal availability at the mine, stockpile availability at the port, blending requirements, train schedules and real-time information on train dispatch, loading and arrival for discharge at the PWCS terminals. Each participant is responsible for monitoring and updating a range of data bases and adjusting operations to changing circumstances. These may include alterations to cargo specification, planned or unplanned maintenance outages or industrial disputes at any point in the HVCC.

**(ii) The Way Forward**

It has been recognised by the coal industry, PWCS and FreightCorp that major gains can be made in terms of maximising system capacity by focusing far greater attention on the interfaces between the respective participants forming the HVCC. While each organisation may attempt to optimise its own operation, the end result can be sub-optimal for the system unless a broader perspective is taken.

During 1996 FreightCorp, PWCS and the NSW Minerals Council undertook an efficiency study of the Hunter Valley rail transport system. Its focus was on the interfaces between the mines, FreightCorp and PWCS. An outcome of the study was an action plan to further enhance the performance of the HVCC.

Following on from the Joint Efficiency Study, a Coal Movement System Framework Study funded by FreightCorp and PWCS was undertaken with participation from representatives of all elements of the HVCC.

The study identified nine principles which underpin the coal handling and transport system and appropriate performance standards and indicators for its operation. It also highlighted the need for alignment in the performance objectives of participants in the HVCC and agreements between the participants.

The outcome of these studies is a far greater focus on commercial and operating agreements existing or being developed between the respective parties within the HVCC supporting and encouraging system positive behaviour as well as meeting an individual organisation's objectives.

*Conclusion*

The growth in Hunter Valley coal exports presents a common challenge for the coal industry and FreightCorp and requires a co-operative approach between all participants within the HVCC. Over recent months the HVCC has been tested to its current limits but the steps presently being taken to implement system improvements, the commitment to further expansion and the pursuit of efficiencies will position the export coal industry for the years ahead.

Through a range of reform initiatives, operational efficiencies, cost (and price) reductions and targeted capital expenditure FreightCorp is seeking to accelerate this process and to remain the preferred haulage operator in the emerging competitive environment.