

**INDUSTRY COMMISSION**

**BLACK COAL**

**INDUSTRY INQUIRY**

**Submission**

**by**

**QUEENSLAND RAIL**

# **C O N T E N T S**

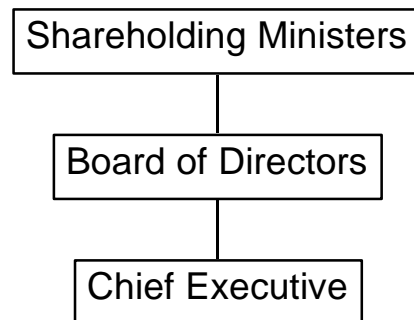
1. Overview of Queensland Rail
2. Queensland Rail's Reform Programme
3. Overview of Coal & Minerals Group
4. Outlook for Queensland Rail
5. Rail Freight Policy
6. Efficiency of the Rail Link
7. Reliability of the Rail Link
8. Coal Rail Freight Rates
9. Developments in Track Access Arrangements

## 1) OVERVIEW OF QUEENSLAND RAIL

Queensland Rail is an integrated railway with a geographically widespread network of approximately 10,000 kilometres of track. It undertakes a wide range of haulage activities including urban and intra-regional passenger transport, primary industry freight, general freight, domestic and export coal freight, minerals and mineral products freight. In 1996/97, Queensland Rail railed a record 105 million tonnes of freight and 42.3 million passengers.

Queensland Rail is a State-owned corporation structured and operated based on principles similar to a private sector corporation. Responsibility for the organisation's broad direction rests with a Board of Directors. Management of the organisation is focussed through the position of Chief Executive, who reports to the Board.

The main difference to a private sector corporation is that Queensland Rail only has two shareholders - the Minister of Transport and the Treasurer.



Queensland Rail's financial structure and reporting arrangements are similar to those of a private sector corporation and it is also subject to similar legislative obligations. The organisation is liable to pay income tax to the State Government through an 'income tax equivalents' regime and to pay dividends to the shareholding Ministers.

All capital expenditure proposals and rail services are required to be undertaken on a commercial basis. However, direct funding from the State Government is provided for non-commercial services (eg, metropolitan Citytrain commuter services).

## **2) QUEENSLAND RAIL'S REFORM PROGRAMME**

The reform programme in Queensland Rail commenced in the early 1980s, a little ahead of the Federal or State Government's initiation of their micro-economic reform agenda. Queensland Railways, as it was known then, was incurring substantial cash deficits. There was a real need to take action to allow Queensland Railways to turn around and to at least break even on a cash operating basis. The staff level stood at nearly 26,000 in 1983. Targets were set in both financial and resource terms to achieve break even. However, despite Queensland Railways achieving the resource targets, the financial targets were not met.

When the State Government changed in 1989, Queensland Rail's staff levels had been reduced to approximately 21,000. The new Labor Government initiated a reform programme to accelerate the progress Queensland Rail was making in improving its operational efficiencies and, in particular, its financial performance.

Following the release of the State Government's Green Paper on Corporatisation in 1990, Queensland Rail was selected as a possible candidate for corporatisation. The first step in preparing the organisation for this was to commit it to a process of commercialisation. It was determined that a change in Queensland Rail's organisational structure would be an essential prerequisite to achieve the necessary commercial culture change. Accordingly, Queensland Rail's organisational structure was changed from a regional-based structure to one based on a private sector corporate structure.

This restructuring was supported by the repeal of the old railways legislation and the introduction of the Transport Infrastructure (Railways) Act 1991. Under the new legislation, responsibility for the broad direction of the organisation was vested in a Board of Directors, which was comprised of private sector representatives.

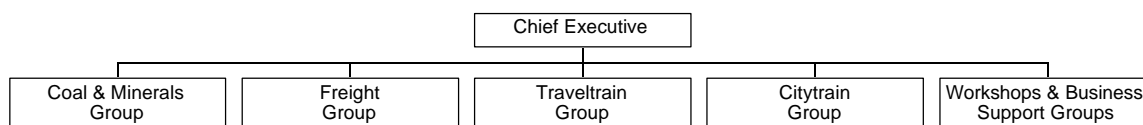
A position of Chief Executive was created which reported to the Board and was responsible for the day-to-day management of the organisation.

Three external customer-focused business Groups were also created, viz:

- Coal & Minerals Group
- Freight Group
- Passengers Group (subsequently split into Citytrain and Traveltrain)

It is important to note that each business Group is relatively autonomous from a financial management perspective and is responsible for achieving its own budgetary and financial targets. However, all Groups share in the corporate borrowing and capital expenditure programmes.

The business Groups are supported by a number of internal service Groups, such as telecommunications, engineering services, corporate training, audit, workshops for major rollingstock overhauls, etc.



Queensland Rail became officially a corporatised entity on 1 July 1995, established under the Government Owned Corporations Act 1993.

The following table provides an overview of the financial performance of Queensland Rail over the past five years:

	<b>1992-93</b>	<b>1993-94</b>	<b>1994-95</b>	<b>1995-96</b>	<b>1996-97</b>
	<b>\$M</b>	<b>\$M</b>	<b>\$M</b>	<b>\$M (2)</b>	<b>\$M</b>
Gross Operating Revenue	1,360.4	1,588.3	1,756.6	2,067.5	TBA
Less Coal Royalties	(1)	221.0	235.0	257.0	
<b>Net Operating Revenue</b>	<b>1,360.4</b>	<b>1,367.3</b>	<b>1,521.6</b>	<b>1,810.5</b>	TBA
Operating Expenses	1,346.5	1,370.2	1,517.8	1,481.0	
<b>Operating Profit Before Tax</b>	<b>13.9</b>	<b>(2.9)</b>	<b>3.8</b>	<b>329.5</b>	<b>TBA</b>
Total Assets	4,388.2	6,024.0	7,202.3	5,846.2	TBA
Total Liabilities	2,216.4	2,569.0	3,174.3	3,588.3	
<b>Net Assets</b>	<b>2,171.8</b>	<b>3,455.0</b>	<b>4,028.0</b>	<b>2,257.9</b>	<b>TBA</b>

**Notes:**

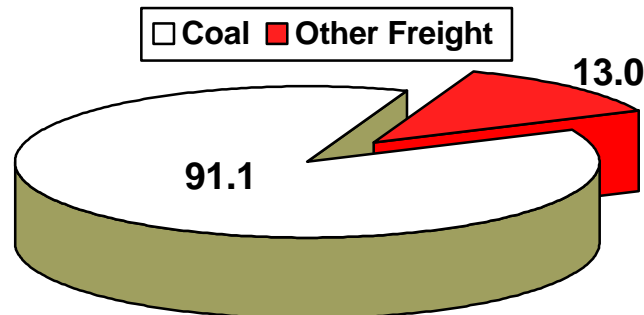
TBA: To be advised. Final figures to be released November 1997.

- 1) Coal royalty payments collected under certain old contracts and remitted to State Government, not reported separately for 1992/93.
- 2) Queensland Rail was corporatised on 1 July 1995 and certain accounting changes implemented, particularly in connection with the valuation of assets.

### 3) OVERVIEW OF THE COAL & MINERALS GROUP

Queensland Rail carried a total of 104.9 million tonnes of freight in 1996/97. This is shown in Chart 1, with the coal component of the total freight tonnage highlighted. It is clear that Queensland Rail is heavily reliant on its coal railing task, and the level of investment in this sector of its business (discussed below) reflects this importance.

**Queensland Rail Freight Tonnes (millions)  
1996/97**

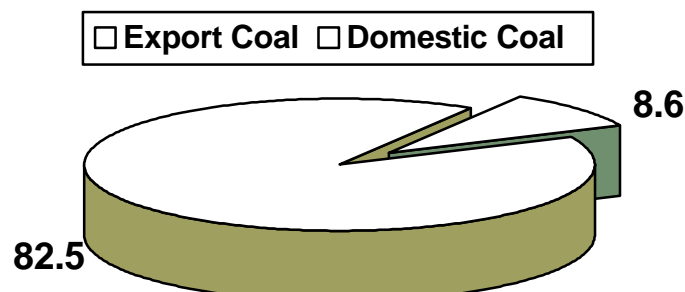


**Chart 1**

The Coal & Minerals Group is a business segment of Queensland Rail which is responsible for providing commercial rail transport services to the mining, mineral processing and electricity industries of Queensland for bulk coal, minerals and metal products.

The quantum and composition of coal freight carried by the Coal & Minerals Group of Queensland Rail in 1996/97 is indicated in Chart 2. Of the 91.1 million tonnes railed by the Group, 82.5 million tonnes were comprised solely of coal bound for export markets.

**Queensland Rail Coal Traffic Task (millions) -  
1996/97**



**Chart 2**

The following is a summary of the main coal rail corridors managed by the Coal & Minerals Group:

#### **A) NEWLANDS CORRIDOR**

<b>Type of Operation</b>	Diesel locomotives, bottom discharge wagons
<b>Export Tonnages Railed 1996/97</b>	6.3 million
<b>Domestic Tonnages Railed 1996/97</b>	0.9 million
<b>Average Haul Distance</b>	156 km
<b>Mines Serviced</b>	Collinsville, Newlands
<b>Port / Unloading Facilities</b>	Abbot Point, Mica Creek Power Station, Bowen Coke Works, QNI Nickel Refinery

#### **B) GOONYELLA CORRIDOR**

<b>Type of Operation</b>	Electric locomotives, bottom discharge (Dalrymple Bay) and tippler (Hay Point) wagons
<b>Export Tonnages Railed 1996/97</b>	25.3 million (Dalrymple Bay); 23.6 million (Hay Point)
<b>Domestic Tonnages Railed 1996/97</b>	Nil
<b>Average Haul Distance</b>	233 km
<b>Mines Serviced</b>	Saraji, Blair Athol, Goonyella, Riverside, South Walker, Peak Downs, Norwich Park, Gregory, Blackwater, German Creek, Oaky Creek, Gordonstone, Burton Downs
<b>Ports</b>	Hay Point Coal Terminal (tippler), Dalrymple Bay Coal Terminal (bottom discharge)

#### **C) MOURA CORRIDOR**

<b>Type of Operation</b>	Electric locomotives, bottom discharge wagons
<b>Export Tonnages Railed 1996/97</b>	4.4 million
<b>Domestic Tonnages Railed 1996/97</b>	3.2 million
<b>Average Haul Distance</b>	167 km
<b>Mines Serviced</b>	Boundary Hill, Callide, Moura
<b>Ports / Unloading Facilities</b>	RG Tanna Terminal, Barney Point, Gladstone Power Station, Queensland Alumina

## **D) BLACKWATER CORRIDOR**

<b>Type of Operation</b>	Electric locomotives, bottom discharge wagons
<b>Export Tonnages Railed 1996/97</b>	19.7 million (RG Tanna); 1.0 million (Barney Pt)
<b>Domestic Tonnages Railed 1996/97</b>	4.1 million
<b>Average Haul Distance</b>	316 km
<b>Mines Serviced</b>	Jellinbah East, Yarrabee, Cook, South Blackwater, Curragh, Blackwater, Ensham, Gordonstone, Gregory, Oaky Creek, German Creek, Norwich Park, Peak Downs
<b>Ports / Unloading Terminals</b>	RG Tanna Terminal, Barney Point, Gladstone and Stanwell Power Stations

## **E) WEST MORETON CORRIDOR**

<b>Type of Operation</b>	Diesel locomotives, bottom discharge wagons
<b>Export Tonnages Railed 1996/97</b>	2.0 million
<b>Domestic Tonnages Railed 1996/97</b>	0.3 million
<b>Average Haul Distance</b>	87.1 km
<b>Mines Serviced</b>	Wilkie Creek, Ebenezer, Box Flat
<b>Port / Unloading Facilities</b>	Fisherman Islands, Swanbank Power Station

It is important to note that these corridors are interconnected, and there is an increasing volume of cross-corridor railings for mines exporting from multiple ports. This is particularly so in the Blackwater and Goonyella corridors.



#### 4) OUTLOOK FOR QUEENSLAND RAIL

Queensland Rail currently hauls thermal coal for use in domestic and overseas power stations and for general use by industry, and metallurgical coal for use in the steel production process. The demand for electric energy from coal fired power stations in the Asian region is creating strong demand for thermal coal. Forecast increases in steel production are driving the increases in metallurgical coal. However this increase in steel production is being offset by steel manufacturing processes requiring reductions in the amount of coal used.

Queensland Rail undertakes an extensive tonnage forecast exercise each year with periodic reviews during the year. All existing and potential customers are requested to supply their raiiling tonnage forecasts for the following five years. This 'raw' customer forecast data is then compared with information from other sources to develop Queensland Rail's tonnage forecasts for each customer by port terminal. These forecasts form the basis for Queensland Rail's financial and resource planning for the next ten years, with particular focus on the first five years.

Queensland Rail's present outlook is that coal tonnages are expected to increase approximately 40% from the 90.6 million tonnes actually railed in 1996/97 to 127 million tonnes in the year 2001/02.

##### Coal Railings (mtpa)

	Actual						Forecast				
	91/92	92/93	93/94	94/95	95/96	96/97	97/98	98/99	99/00	00/01	01/02
Export	70.9	70.5	72.1	77.7	76.0	82.5	88.0	95.8	104.8	110.0	116.0
Domestic	5.8	6.0	6.6	7.5	8.2	8.6	9.7	10.3	11.0	11.5	11.0
<b>Total</b>	<b>76.7</b>	<b>76.5</b>	<b>78.7</b>	<b>85.2</b>	<b>84.2</b>	<b>91.1</b>	<b>97.7</b>	<b>106.1</b>	<b>115.8</b>	<b>121.5</b>	<b>127.0</b>

**Table 1**

To meet the forecast increase in railings, Queensland Rail has embarked upon a 5 year \$1.1 billion capital investment program within its coal networks. This program in conjunction with the current labour reform initiatives will result in significant productivity improvements and additional capacity for the haulage of coal.

Major approved capital or proposed expenditure projects include:

- The construction of over 2,100 new wagons of 104 gross tonne capacity. These wagons will replace the entire existing 71 tonne wagon fleet, and provide additional capacity for expected business expansion.
- The upgrading of the 73 tonne coal wagon fleet to 80 gross tonnes in order to increase payloads.

- The purchase of up to 38 AC traction diesel electric locomotives to replace the existing diesel locomotive fleet with more efficient and reliable equipment and to provide additional capacity for expected business expansion.
- Upgrading of infrastructure and relaying of existing timber sleepered track with concrete sleepers and heavier rail to increase capacity and reduce maintenance costs.
- The construction of a number of spur lines to link new mine sites with the existing rail network.
- Modifications to infrastructure and rollingstock to enable the speed of coal trains to be increased from 60kph to 80kph.

## **5) RAIL FREIGHT POLICY**

In any discussions involving the level of rail freight rates or contractual terms and conditions applied by Queensland Rail, it is important to take into consideration the era in which the rail contracts were settled. This is important because of the major shift in coal rail freight policy which occurred in the early 1990s.

In a nutshell, Queensland Rail has rail contracts from two distinct policy periods, ie, those long-term contracts entered into by rail users prior to 1992 and those entered into since early 1992.

Prior to 1992 coal rail freight rates were determined and negotiated directly between Queensland Treasury and mining companies, with Queensland Rail basically having the non-commercial role of providing the rollingstock and infrastructure required by the mine and implementing the terms of Treasury's rail contracts. The level of the freight rate set by Treasury was usually based on the mine's ability to pay. In many instances, this resulted in freight rates being significantly in excess of the costs of haulage.

A number of Treasury-negotiated rail haulage agreements are still being applied and are paying rail freight rates in excess of the commercially determined haul costs. This excess is collected by Queensland Rail and remitted to Queensland Treasury as a defacto royalty payment. The quantum of the 'excess' is reported in Queensland Rail's Annual Report.

It is also important to note that under the former Treasury pricing policy, mining companies in most instances were also required to fund all of the locomotives, wagons and infrastructure required to provide the capacity for their respective hauls. This funding was usually by way of an up-front contribution which was non -refundable.

Although responsibility for determining and negotiating coal freight rates was transferred to Queensland Rail, it was done on the basis that the Treasury-negotiated contracts would remain in place either until they terminated or the year 2000, whichever was the earlier.

More recently, the State Government has allowed the 'excess' component in these older contracts to be separated from the contract, which has enabled Queensland Rail to renegotiate the contracts with its customers on a commercial basis. It is expected that all of the older rail contracts will have been renegotiated by mid -1998.

Since early 1992, Queensland Rail has been responsible for determining rail freight rates in accordance with the following pricing principles. These principles have taken into account the fact that there has been limited contestability in coal transport markets, pending the introduction of third party access arrangements in the year 2000.

These principles in summary are:

- 1) Freight rates are based on the expected costs of providing the transport service, and cover train operating, rollingstock maintenance and infrastructure maintenance costs. Rates also include a component which provides a commercial return on the rollingstock and infrastructure assets used for the haul. The rate of return applied is consistent with the target rate of return required by the Shareholding Ministers to be achieved by Queensland Rail on its assets.
- 2) Freight rates take into account the type of freight rate escalation arrangement required by the customer, the period of the contract term and other terms and conditions of the rail contract.
- 3) The best estimates of the future costs of the rail traffic are used, ie, economic costs, rather than historical costs of existing traffics.
- 4) The return on assets component is based upon each asset's current written down replacement value, determined in accordance with the State Government's asset valuation policy for Government Owned Corporations. The return is sought over the expected life of the asset, not over the contract term.
- 5) All rail freight arrangements include productivity sharing mechanisms, typically escalating freight rates at substantially less than the full movement in the Consumer Price Index.
- 6) Rail contracts are based on normal commercial 'take or pay' arrangements. These provide for the customer to continue to compensate Queensland Rail for non-discretionary costs incurred by Queensland Rail in providing the capacity required, if the customer fails to rail the contractual tonnage.
- 7) Queensland Rail, although not under any legal obligation, provides recognition to the present owners of mines for which rail asset funding contributions have previously been made by the mining industry.

As will be seen from the above principles, Queensland Rail's freight rates have been closely related to the operating and capital costs of the haul. In comparing freight rates with those of other States or countries, it is important that differences in haul costs and pricing principles are taken into consideration (refer Section 6 for a discussion on the factors impacting on haul costs).

The pricing principles adopted by a railway are substantially influenced by the nature and size of the market within which the railway operates. For example, in Queensland export coal accounted for 82.5 Mt or 79% of the total 105 Mt of freight hauled by Queensland Rail in 1996/97. Whereas in the United States, total coal exports (even including that which is barged to export coal terminals) accounted for only 4% of the total 1,610 million short tons hauled by rail in 1996. It is known that in the United States export coal rail haulage is often priced at the margin to win the business. Where a specific commodity is only a small part of the total business, railways can afford to price below average costs so long as the traffic provides a contribution to the bottom line. However, in Queensland Rail's case, because export coal haulage is such the dominant business segment, it can not afford to price its dominant traffic on a

marginal basis. Therefore, comparisons of export coal freight rates between Queensland and North American railways is often distorted by pricing principles.

A major issue to take into account is that from November 2000 the full weight of competition legislation becomes applicable in respect of coal industry access to rail. As the year 2000 approaches, Queensland Rail will need to be competitive relative to emerging greenfield operators. Therefore, Queensland Rail has a major incentive to operate at best practice in order to both remain competitive and to provide a reasonable return.

Queensland Rail and its customers traditionally have entered into relative long-term rail contracts, usually with terms in excess of 10 years. Even today, with the legislative framework now in place to support competition from private operators, long-term rail contracts are still being entered into by coal customers.

## **6) EFFICIENCY OF THE RAIL LINK**

### **Best Practice Benchmarking (Operating Costs)**

In 1993, a Joint Advisory Group (JAG) comprising representatives from the Coal Industry, Government and Queensland Rail was established to advise on how Queensland Rail compared with other railways in the world and in what areas Queensland Rail could improve to become a 'World's Best Practice Railway'. Queensland Rail was compared with more than forty railways world wide and performance was measured against more than seventy 'benchmarks' in broad groups such as rollingstock productivity, labour productivity, maintenance costs and administration costs. The benchmarking exercise showed that Queensland Rail's coal operations are up there with the best railways in the world and it rates in the top ten in many performance areas.

Burlington Northern was identified as an appropriate railway to benchmark Queensland Rail's coal operations against.

The results of the initial benchmarking review showed that Queensland Rail's 1992/93 coal operating costs per NTK were approximately 25% higher than the estimated Burlington Northern coal haul operating cost per NTK for the 1992 year. However, of the 25% 'gap', 7% was considered to be due to solely structural factors which were out of Queensland Rail's control (ie, fuel/energy prices, length of haul and material/equipment costs) and an estimated 8% required Queensland Rail to incur major capital expenditure (which could not reasonably be expected within the short-medium term). This left a 10% 'gap' capable of being closed by year 2000.

As a result of the initial benchmarking review and in the absence of a contestable market, Queensland Rail agreed to share with the coal industry the benefits obtained from closing the 10% medium term achievable gap as well as improved productivity by a further 8% estimated to be the Burlington Northern rate of improvement. This is being shared, regardless of whether Queensland Rail achieves "best practice" or not. The benefits were agreed to be shared by escalating freight rates at less than full CPI.

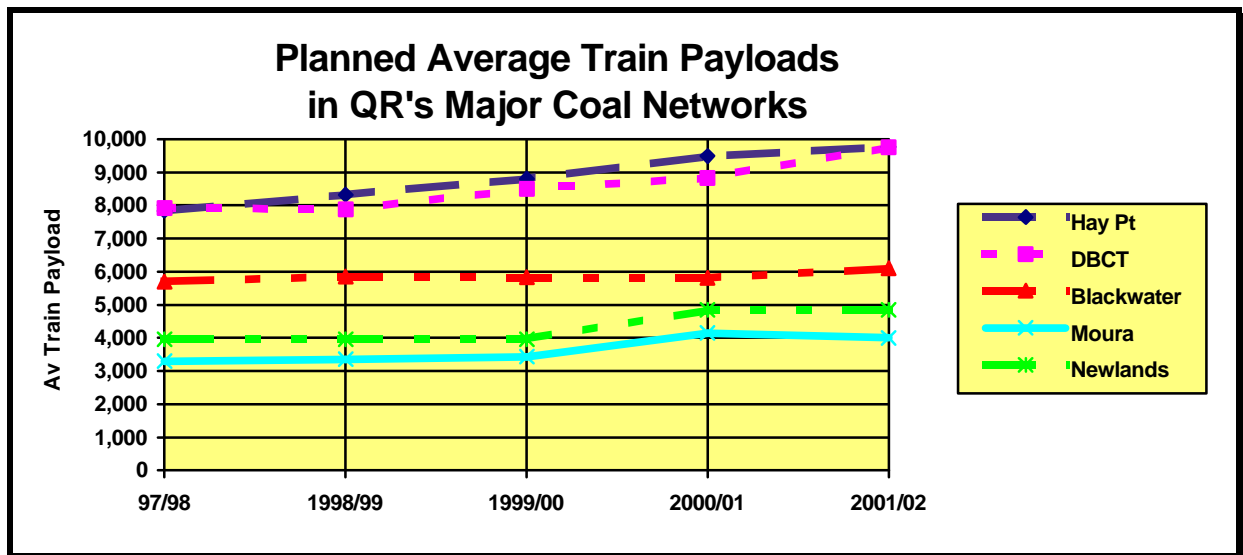
### **Main Factors Impacting on Haul Costs**

There are many factors which impact on the costs of rail haulage. These factors include traffic density, haulage length, track gauge and grade effects, demand variation, purchasing power, ownership/funding and regulatory regime.

An increase in traffic density will reduce haulage costs, on a cents/ntk basis, because of reduced infrastructure capital costs (due to improved asset utilisation), reduced fixed infrastructure maintenance costs, reduced station costs (due to their high fixed nature), reduced 'as required' crew costs (due to improved crew utilisation) and reduced fixed energy costs. The average traffic density on Queensland Rail's coal corridors is only approximately 15 million tonnes per annum. Whereas the average traffic density of Queensland Rail's benchmarking partner, Burlington Northern, is approximately 45 million tonnes.

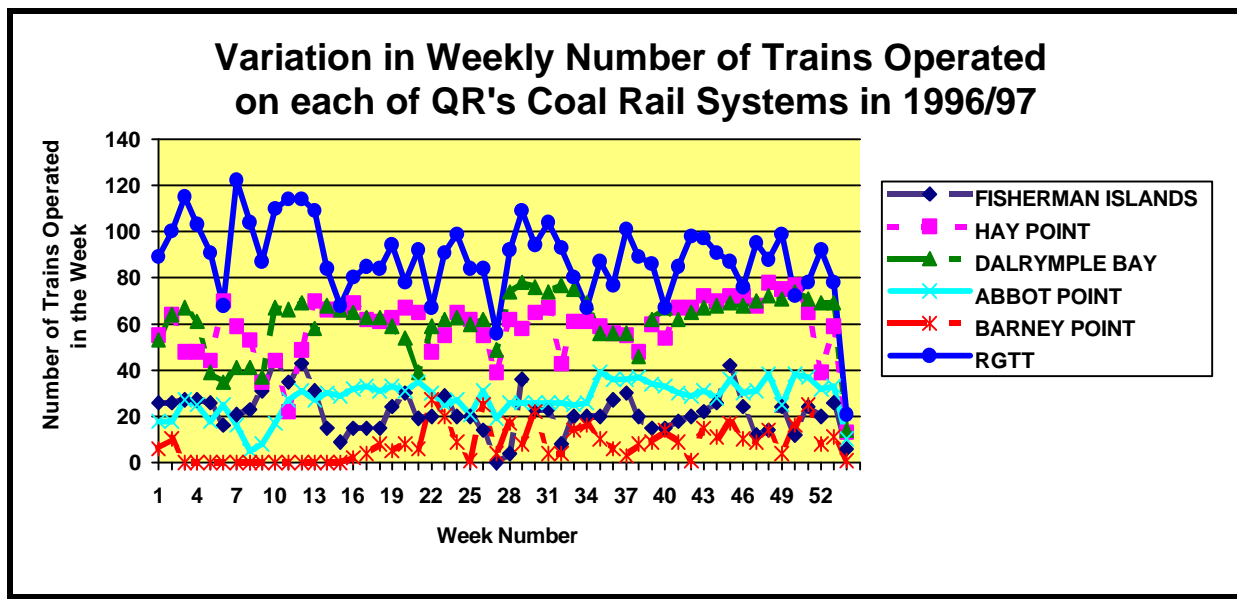
An increase in haulage length will reduce haulage costs, on a cents/ntkm basis, because of reduced fixed infrastructure capital costs (due to asset concentration reducing with distance), reduced fixed infrastructure maintenance costs (due to increased utilisation of special gangs and administrative effort), reductions in turnaround times (due to higher average speeds achieved on longer hauls) and reduced station costs (due to the high percentage of shunting and train management costs at terminals). The average haul distance for Queensland Rail's coal hauls is 280 kilometres whereas the haul distance of many north American railroads is several times this. The average haul distance, for example, of Queensland Rail's benchmarking partner Burlington Northern, is 1200 kilometres.

Track gauge and grade effects determine train payloads, train power to trailing load requirements and energy/fuel consumption. Generally, higher train payloads reduce haulage costs due to lower crew and rollingstock costs and increased infrastructure capacity. As shown in Chart 3, Queensland Rail plans to increase the average payload of trains in the major rail systems by the introduction of new rollingstock or upgrading the capacity of existing rollingstock. However, there are limitations with Queensland Rail's narrow gauge.



**Chart 3**

Queensland Rail's short term coal haulage demand varies for many reasons including mine production and stockpile levels, port stockpile levels, shipping schedules, market demand, weather, strikes, derailments and breakdowns, seasonal and economic factors. Demand variation adds to the cost of rail haulage due to increased infrastructure and rollingstock capital requirements, and the train crew resources required to meet the demand peaks. As shown in Chart 4, the weekly number of trains operated in 1996/97 to each of Queensland's export coal terminals varied considerably.



**Chart 4**

Queensland Rail suffers large asset acquisition price disadvantages compared with North American railways. Queensland's narrow track gauge and restricted rollingstock profile means that rollingstock operating on the network is very unique. Rollingstock is acquired by Queensland Rail usually by calling tenders for its construction and typically in very small order quantities. There are only a handful of rollingstock manufacturing companies in Australia because of the small market who bid for railway work and, if successful, gear up for the contract. An example of the cost disadvantage, is that a new generation, 3,000 horsepower, 120 tonne AC locomotive suitable for the Queensland coal network is estimated to cost between \$3M to \$3.5M each, whereas a 6,000 horsepower, 190 tonne, standard gauge, North American locomotive costs approximately \$3.3M (A\$, landed in Australia). However, the off the shelf American locomotive has almost twice the haul capacity of the Queensland locomotive.

Similarly, comparison of haulage costs are distorted by ownership or funding issues. In Queensland, mining companies provided contributions in the past for funding the coal rail network and acquiring rollingstock (in return for lower freight rates). However, these contributions were made on a non refundable basis, and often by owners who are no longer in the Queensland coal industry. In North America much of the wagon fleet is privately owned and railway companies give concessional freight rates to the owners on that basis.

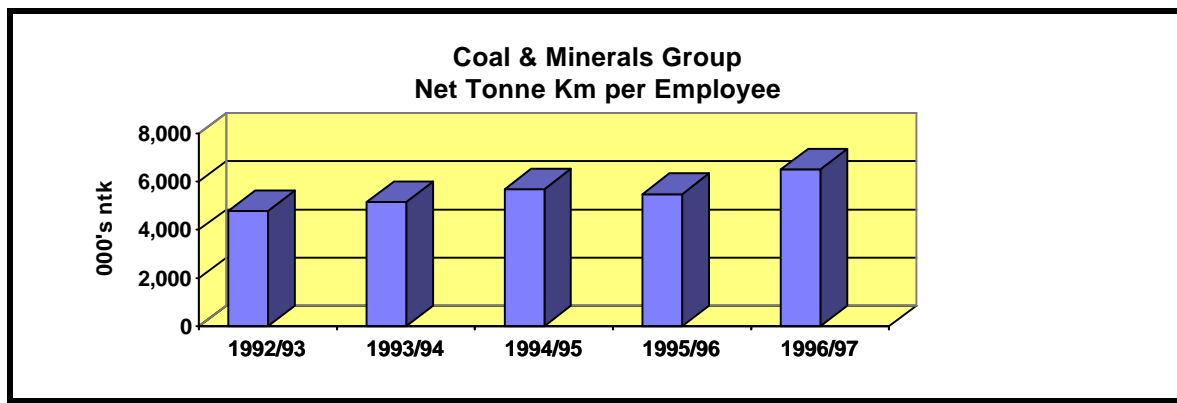
### **Initiatives to Improve Efficiency and Reduce Haul Costs**

Queensland Rail has introduced many initiatives aimed at improving the efficiency and reducing rail haulage costs. These initiatives include:

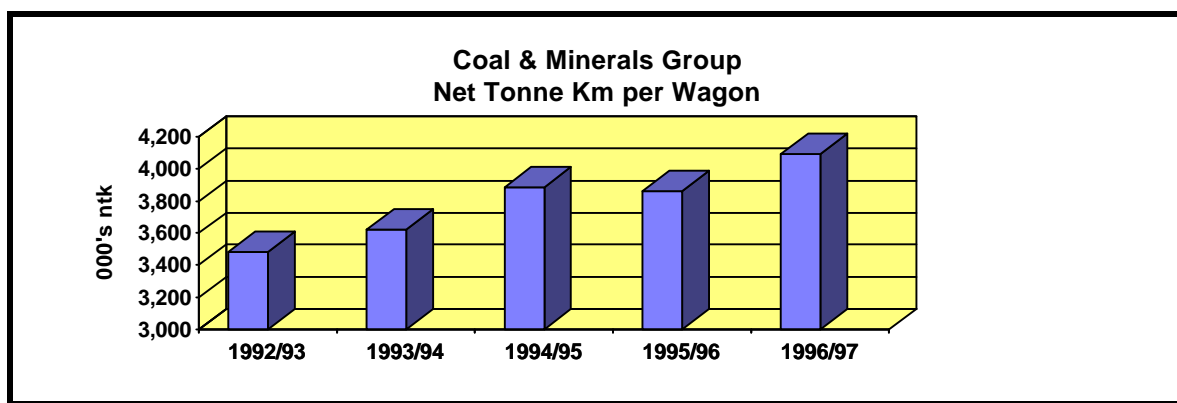


- Implementation of Two Driver Operation working shift lengths of up to 12 hours duration has brought major cost efficiencies with improved rollingstock productivity and train crew utilisation.
- 80 kmh train operation is currently being introduced into the Goonyella and Blackwater rail systems and will reduce mine to port cycle times of trains and increase rollingstock productivity.
- The Coal & Minerals Electronic Link (CAMEL) customer communication has been established on the Internet. This system provides "real time" information to customers on train arrival times and various performance measures.
- In 1996/97, Queensland Rail took delivery of 146 104 gross tonne coal wagons. These were part of an initial order for 400 wagons of a potential 2,500 wagons Queensland Rail plans to acquire to increase the capacity of the coal fleet and to replace low capacity wagons. The acquisition of 104 gross tonne wagons will allow Queensland Rail to operate train consists in the Goonyella system of up to 9,600 tonnes which is a 26% increase in payload over the largest trains previously operated.
- A new Traincrew Agreement was introduced in 1996/97. It covers a wide range of terms which are aimed at achieving higher train crew productivity in exchange for better employment conditions. The benefits of the Traincrew Agreement include increased flexibility, including part introduction of Driver Only operation.
- Queensland Rail is believed to be the first railway in the world to obtain quality certification for heavy haul operations. In late 1993, Queensland Rail received quality certification to ISO - 9002 for its coal operations. Queensland Rail 's commitment to quality is further evidenced by its Coal & Minerals Infrastructure Division winning an Australian Quality Award for excellence in 1996.
- Queensland Rail has developed a five year strategic Research & Development Plan to develop new ways to drive productivity improvements in its coal and minerals operations. Queensland Rail is conducting or planning to undertake research and development activities in the following areas:
  - 1) in cab signalling;
  - 2) dust suppression;
  - 3) remote control shunting;
  - 4) AC traction;
  - 5) Hot box, overload and wheel impact detection;
  - 6) formation development;
  - 7) concrete culvert repair; and
  - 8) close coupled wagons.

The results of these and other initiatives are clearly demonstrated with improvements in labour and wagon productivity. As shown in Charts 5 and 6, labour and wagon productivity has increased by 36% and 15% respectively over the past 4 years.



**Chart 5**



**Chart 6**

## **Freight Incentives**

In 1993/94, Queensland Rail introduced the Freight Incentive Scheme as a means for improving the efficiency of train operations. The objective of the scheme is to pass on benefits to customers based upon savings Queensland Rail is able to realise through improvements in train loading or unloading performance.

Queensland Rail typically targets terminal availability, train loading time and wagon loading level under the freight incentive scheme. Mines are rewarded through freight rate reductions if they can on a consistent and sustainable basis achieve target levels of performance. Improved loading performance results in cost reductions to Queensland Rail through reduced turn around times, greater train loads and improved terminal availability which will lead to improved scheduling of trains to achieve better utilisation, improved train crew utilisation and reduced rollingstock requirements.

There are currently 18 coal mines in Queensland being monitored or paid under the freight incentive scheme.

Queensland Rail is currently introducing freight incentives into new performance areas such as raling variability and pre and post mine loading delays to encourage customers to assist with improving the efficiency of the transport service.

### **Corridor Groups**

Queensland Rail encourages the formation and actively participates and facilitates user groups. The Blackwater User Group, the Moura User Group and the West Moreton/Surat User Groups are examples of such groups consisting of representatives from mining companies, Queensland Rail, coal utilisation companies and coal terminals who meet regularly to discuss issues affecting the performance of the coal supply chain. Groups typically discuss capacity issues to coordinate system expansion, train scheduling to optimise resource requirements, co-ordinate maintenance activities between parties to maximise system availability and monitor performance.

An example of an initiative being tackled by users of the Blackwater rail system is a trial to minimise raling variation. This initiative stemmed from a joint study of the Gladstone coal supply chain which found, amongst other things, that the degree of raling variability in the rail system was excessive (due to the manner in which the mines order trains) and that fewer train sets should be able to haul the tonnes if raling variation could be reduced. This resulted in a 3 month trial being commenced in July this year where Queensland Rail offered an incentive to the users if the tonnage could be hauled with one less train consist.

### **Corridor Capacity Modelling**

Queensland Rail undertakes extensive corridor capacity planning of the coal networks to ensure that there is sufficient rail capacity to haul the forecast or contracted tonnes in the respective coal networks. Each year, Queensland Rail surveys its existing and potential customers to determine their forecast raling requirements over the next 6 years. Independent market research is also typically obtained to provide advice on the likely demand and supply potential to compare with company forecasts and to determine likely raling requirement over the next six years.

The tonnage forecasts are then fed into various spreadsheet and simulation models to determine rollingstock and infrastructure upgrade requirements over the planning horizon. Queensland Rail has detailed simulation models of its major coal networks to assist with planning capital works requirements. These models can quickly determine the effects to key performance indicators such as throughout capacity, cycle time and rollingstock utilisation from changes to assumptions such as train speed, additional passing loops or track duplication, tonnage increases, different scheduling arrangements etc. An example of a top level "dynamic" screen from the Goonyella model is shown in Figure 1.

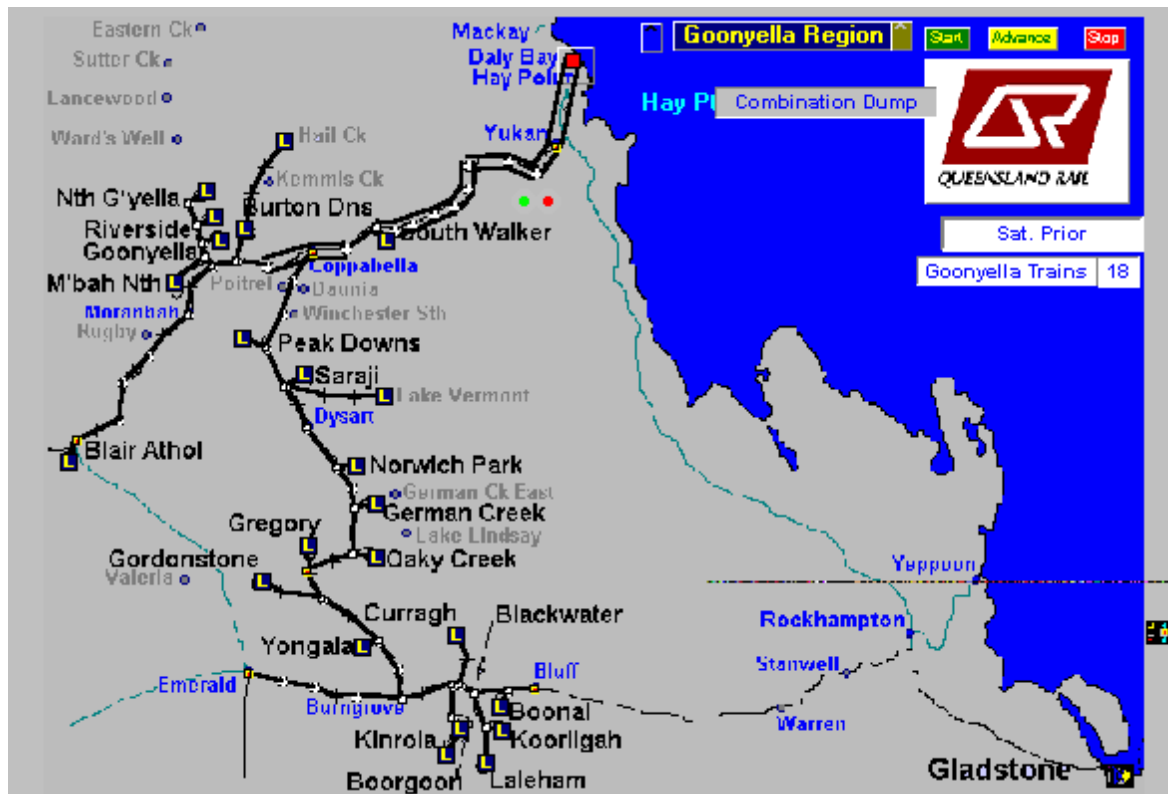


Figure 1

## Export Coal Credit Scheme

The Export Coal Credit Scheme, an initiative of the Queensland Government and administered by Queensland Rail, is designed to encourage new investment in the Queensland Export Coal Industry.

Under the Scheme, companies with an interest in an operating export coal mine in Queensland, as at 30 June 1992, earned 'credits' at the rate of \$0.50 per tonne on export coal railings over the three year period ending 30 June 1995. In total, Queensland Rail issued over \$99 million worth of redeemable 'Credit Coupons'. The Coupons are negotiable, bearer securities and can be freely assigned between companies.

Any company which has either been issued Credit Coupons or assigned Credit Coupons from another company may redeem Credit Coupons for cash, at the rate of \$1.00 per tonne, against new tonnage (ie, railings from new mines which commenced production after 30 June 1992) or expanded capacity (ie that is railings in excess of 1991/92 levels from existing mines) export coal railings from 1 July 1992 until 30 June 2002.

To date Queensland Rail has redeemed over \$35M of Credit Coupons for cash and has a liability for another potential \$63.7M of redemptions until 30 June 2002.

## Productivity Sharing by Queensland Rail

In the absence of a contestable market Queensland Rail has shared productivity improvements with its customers through a number of mechanisms but principally through reduced rail freight escalation.

Over the past three years, Queensland Rail has passed back to the mining industry an estimated \$40 million in moderated freight rate escalation. Over the next 4 years a further \$150 million is estimated will be saved by customers through reduced freight rate escalation.

Queensland Rail's freight incentive scheme, where freight credits are given for improvements to customer train loading or unloading performance has previously been discussed. Over the past three years, Queensland Rail has passed back to the mining industry some \$15 million in freight incentives. Over the next four years a further \$50 million is estimated will be saved by customers through the freight incentive scheme.

### **Performance Targets**

Queensland Rail monitors key performance indicators in all areas for its coal and minerals business. Performance targets have been established in the Coal & Minerals Group and divisional business plans to drive productivity improvements required to under write the productivity sharing arrangements discussed above. Budgets for Coal & Minerals divisions and resource planning models have the improved performance targets factored in.

Planned improvements in train payloads and labour and wagon productivity are also shown in Charts 3, 5, and 6, respectively.

## **7) RELIABILITY OF RAIL LINK**

There are many factors which underlie the reliability of the Queensland Rail's coal network. Queensland Rail has a relatively modern rollingstock fleet, recently upgraded track infrastructure in the majority of coal systems, conducts scheduled or condition based maintenance of equipment and has in place an Enterprise Bargaining Agreement with its Unions which prevents direct industrial action in its coal operations unless 7 days notice is first given.

Queensland Rail had twenty main line derailments in 1996/97 with an average of 2.9 wagons and 0.25 locomotives derailed per incident. This is a relatively low number of derailments of minor derailments considering Queensland Rail transported over 91 million tonnes of coal in 1996/97.

The Coal & Minerals Group of Queensland Rail had only four industrial disputes in 1996/97 in which time was lost. In total 1,426 days were lost which represents only 0.03% of total working days. Three of the four disputes involved stoppages less than 2 hours in duration.

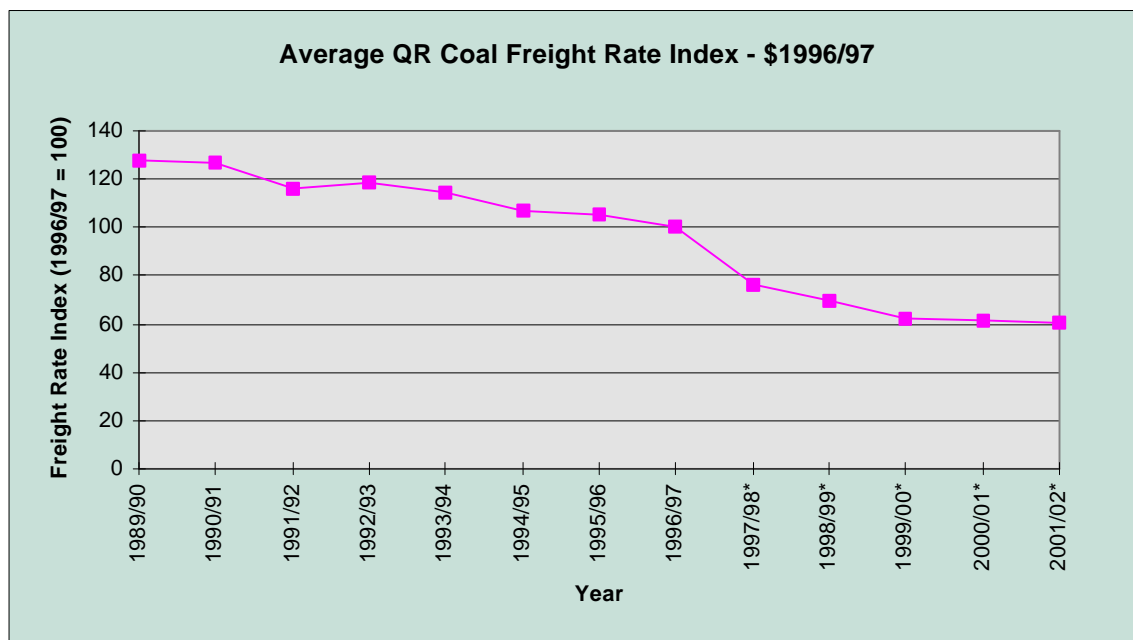
## 8) COAL FREIGHT RATES

The average freight rates for coal railed by Queensland Rail have decreased markedly over the period following its commercialisation in 1989/90.

On an index scale based on 1996/97, the average coal rail freight rate paid to Queensland Rail prior to commercialisation (in 1989/90) was 27% higher than it was in 1996/97. The average coal rail freight rate payable in 2001/02 is expected to be a further 26% less than it was in 1996/97.

This rate decrease reflects a range of factors, including labour and asset productivity improvements which have occurred during this period.

Chart 8 indicates the change in the average freight rate paid to Queensland Rail over the period from 1989/90 to 2001/02.



**Chart 8**

Note: \* denotes Queensland Rail Corporate Plan forecast figures

As Queensland Rail moves towards 2000, market pressures resulting from contestability have become the driver of reduced coal freight rates.

## **9) DEVELOPMENT IN TRACK ACCESS ARRANGEMENTS**

### **Rail Access Regime**

Third party access to rail services is currently governed by Part IIIA of the Trade Practices Act, but with access to coal services being limited by Section 78 of the Competition Policy Reform Act 1995. In mid 1997, the Queensland Government passed the Queensland Competition Authority Act 1997(QCA Act) which provides for a State based regime for third party access to services provided by essential infrastructure. It is understood that the Queensland Government will be seeking certification of this State based regime as provided for under the Trade Practices Act. Upon certification, all rail access issues will be expected to be covered by the State regime.

The Queensland legislation is generic in nature and, as such, does not deal with industry specific access issues. The QCA Act establishes the Queensland Competition Authority(QCA) as the relevant regulatory body and provides for a three tiered structure for addressing the issues of third party access in Queensland as follows:

- QCA Act 1997;
- Access Code; and
- Access Undertaking.

Access Codes will be the vehicles by which the generic regime will be tailored to industry specific infrastructure (eg the Queensland Access Code for Rail) and are to be prepared by Government (if required) as subordinate legislation in respect of particular industry sectors.

Access Undertakings will set out the specific principles, policies and processes by which the access provider will negotiate access. Individual access providers (such as Queensland Rail) have the opportunity to prepare their own Access Undertakings for submission to the QCA on a voluntary basis. The Act also provides for the QCA to require an Undertaking from an access provider or for the QCA to prepare an Undertaking to apply to an access provider. The suitability of the Undertaking is a matter for the QCA, following a public inquiry process. QR is currently preparing a voluntary Access Undertaking as provided for under the State regime and is targeting to submit the Undertaking to the QCA in late 1997 or early 1998.

The proposed State based access regime will apply to infrastructure declared by regulation. It is anticipated that elements of Queensland Rail's rail infrastructure will be declared available for access in late 1997. This declaration will incorporate a limitation for coal services mirroring the Section 78 limitation referred to above.

While the legislative framework to support third party access has been available in Queensland since mid 1995 via Part IIIA of the Trade Practices Act, the process for third parties gaining access to the rail network is still evolving. As a result, it is too early to assess the impact of third party access on coal rail services and whether in fact any inappropriate barriers or impediments to above rail competition exist.



In order to respond to the requirements of third party operators and to comply with its legislative obligations, Queensland Rail has established an independent Network Access Unit, separate from its business units providing the train services. The Network Access Unit is responsible for all dealings with third party operators seeking to access the Queensland Rail network. In addition the Queensland Rail Access Undertaking, currently under development, proposes ringfencing arrangements whereby Queensland Rail's business units and third party operators will be treated in a consistent manner such that third party operators will not be discriminated against when competing with Queensland Rail train services.

### **Access Pricing Principles**

The objectives of rail access pricing need to address the issues of cost recovery, market distortion and economic efficiency. Recognising that rail operators will service a variety of end user markets, including black coal, it is believed that market based pricing constrained by cost based floor and ceiling limits will be most likely to lead to an optimum economic outcome. This is consistent with traditional approaches to the determination of rail haulage rates and also with approaches to access pricing overseas.

From a regulatory point of view, there is a need to ensure that access pricing does not result in the achievement of monopoly profits by the infrastructure provider, nor the cross subsidisation of loss making sections of the network. This requirement is achieved by the use of the abovementioned cost based limits applied to services on both an individual and a significant grouping basis, with a floor limit of the avoidable cost of service provision to restrict cross subsidisation and a ceiling limit of the stand alone cost of service provision to restrict monopoly pricing.

The resultant range between the floor and ceiling limits provides the flexibility to negotiate market prices suited to the particular end user market and hence the best opportunity to optimise asset utilisation by recognising the ability of operators to pay. This will enable marginal operators to still gain access where some positive contribution can be made to joint fixed costs.

Essential to any approach to pricing based on ability to pay is the need to avoid the prospect of artificial distortion of the competitive positions of rail transport end users due to a discriminatory application of pricing between operators. Whilst flexibility in pricing is required to allow the achievement of commercial outcomes, this needs to be balanced against the need to ensure that such flexibility is not exercised in a manner that inappropriately disadvantages any one end user relative to its competitors.

For further information, please contact:

Mr Kevin Fenby  
General Manager Business Development  
Coal & Minerals Group  
Queensland Rail  
GPO Box 1429  
Brisbane Qld 4001

Telephone: (07) 3235 1001  
Facsimile: (07) 3235 2598