

## Chapter 12 – Stand-Alone Costs

### KEY ASPECTS

**Coal traffic charges** - coal traffic on the four Central Queensland coal systems will pay up to the stand-alone costs of the services they are provided.

**Non-coal traffic charges** - non-coal traffic will be responsible for the same incremental capacity charges that apply to the coal traffic.

**Maintenance charges** - maintenance charges have been estimated on the basis of the maintenance costs that would be incurred for meeting only coal system traffic.

**Forecast maintenance costs** - QR's forecast maintenance costs are estimated to exceed efficient levels by between \$11-13 million per annum over the regulatory period.

**Other operating costs** - QR's remaining operating costs have been attributed to the coal traffics using a series of allocators. The costs are at the upper bound of a reasonable range of efficient stand-alone costs for these functions.

## 12.1 Introduction

QR proposes that the coal traffic operating on the Central Queensland corridors pay access charges based on the stand-alone cost of QR providing access to its network. The stand-alone cost represents the maximum amount the owner of a natural monopoly can charge its users without providing those users (or someone else) with an incentive to replicate QR's network and offer an alternative service.

Stand-alone cost therefore sets the maximum amount QR should be able to charge users of its below-rail coal network. This is because coal mines currently have no effective alternative means of transporting their product to market. Consequently, they are tied to using QR's below-rail network, at least for the foreseeable future, notwithstanding their ability to choose their preferred above-rail operator.

The theory underpinning the stand-alone cost approach is that this is the maximum amount that a below-rail service provider could charge in a competitive market. In theory, if QR sought to recover more than the (efficient) stand-alone cost of the below-rail services it provides, a hypothetical competitor would have an incentive to duplicate QR's network and offer a lower price to QR's existing customers. Whilst such an outcome is most unlikely in practice, the approach provides a theoretical cap that can be applied for the purpose of regulating QR's access charges (that is, its reference tariffs).

QR's reference tariffs are based on the concept of stand-alone cost for each of the four Central Queensland corridors carrying coal traffic - the Blackwater, Goonyella, Moura and Newlands systems. In order to assess the appropriateness of the quantum of QR's proposed stand-alone costs for these corridors, it is necessary to break QR's approach down into three components:

- identifying the stand-alone costs of the coal network as a whole;
- identifying the directly attributable cost for each corridor and allocating the remainder of the stand-alone cost of the system to the four corridors comprising it; and
- for the Goonyella and Blackwater systems, providing a basis for allocating the corridor cost to the individual clusters.

In addition, it is necessary to identify whether there are any non-coal traffics that might be expected to be attractive for a hypothetical competitor. This is because if a hypothetical competitor were to bypass QR's network, it would not confine itself to the coal traffics – instead it would seek to attract any traffic that covered more than the incremental cost it imposed on the network. In other words, the limit on the revenue that could be earned from QR's coal traffic on these corridors is the difference between the stand-alone cost of these traffics and the net contribution (total revenue less incremental cost) received from non-coal traffics.

The assessment of stand-alone cost for the relevant parts of the network comprising the four corridors broadly includes three components:

- below rail assets, being the assets required to provide the services on a stand-alone basis;
- the maintenance costs for the relevant track; and
- other expenditure, including train control and overheads.

The first two categories of expenditure are line-section specific assets and costs respectively, whilst the final category comprises regional and network-wide costs.

Finally, once a reasonable basis has been developed to determine the quantum of QR's current stand-alone costs, it is necessary to assess whether there is an efficiency gap that requires an adjustment to QR's allowed revenue stream.

## 12.2 Estimation of stand-alone costs

### *Background*

In assessing the stand-alone costs associated with the below-rail coal services provided by QR's network, the QCA adopted the following steps:

- identified any traffic that recovers more than the incremental cost that it imposes on the system, and assessed its contributions;
- assessed the appropriate level of stand-alone asset-related charges, having regard to existing traffic;
- assessed the efficient stand-alone maintenance costs for the relevant traffic; and
- assessed the efficient stand-alone cost of the remaining operating expenditure.

### *Stakeholder views*

#### *General comments*

**QR** - the QCA's approach for the assessment of the stand-alone costs for providing below-rail services to the coal industry in Central Queensland is generally consistent with the way in which QR identified the stand-alone costs for a group of services should be estimated (see QR Costing Manual, December 1999). While acknowledging the QCA has adopted a reasonable approach in many respects, QR has some concerns, in particular:

- the estimate of efficient maintenance cost;
- the allowance for train control costs; and
- the assessment of regulatory compliance costs.

#### *Stand-alone assets*

**QR** - the QCA may have inadvertently double counted the extent of assets on the Blackwater system that are required for the provision of non-coal traffics. This is because the QCA has both 'optimised' the asset base for the coal system in order to reflect QR's estimate of the stand-alone assets required for coal traffics, and also deducted the forward-looking estimate of incremental capacity costs for non-coal traffics from the allowable revenue. QR's concern is explained in more detail below.

In its analysis of stand-alone assets, the QCA has effectively separated the Blackwater system into the central line and north coast line elements. The QCA accepted the exclusion of 48km of duplication on the north coast line for the purpose of optimising the Blackwater system to reflect coal only requirements. However, in addition to this, the QCA identified an 'incremental capacity cost' for all trains on the central line, and effectively deducted the equivalent asset value from the central line component of the Blackwater system. QR has estimated that this additional adjustment is equivalent to a reduction in duplication on the central line section of the Blackwater system of approximately 25-30km.

QR is concerned that, as a result of this process, the QCA has effectively optimised the Blackwater system to a point where the included infrastructure is not sufficient to sustain current coal train services and the existing performance levels. The resulting reduction in allowable revenue will eventually discourage QR from reinvesting in the infrastructure asset and may potentially lead to a deterioration in service potential.

*Maintenance costs*

**QR** - the QCA's identification of QR's historic maintenance cost for the coal region compared to forecast maintenance costs provides a misleading impression of a significant rise in maintenance costs in 1999/00. This is not a comparison of like with like. For example:

- the forecast costs are for the entire Central Queensland region (including line sections not used for the carriage of coal) while the historic costs are only for coal-carrying line sections;
- while the QCA has included a VERS allowance in forecast costs, historic VERS costs have not been included; and
- the costs associated with the maintenance of ISG facilities is included in the forecast costs, but not in the historic costs (as they were previously treated as regional cost).

Therefore, while there has been an increase in maintenance costs due to the proposed ballast cleaning program, as suggested by the QCA, this increase is nowhere near the magnitude implied by the QCA.

QR makes the following comments on the QCA's assessment of stand-alone forecast maintenance costs:

*Non-coal lines and non-coal traffic on coal lines:* while QR's Network Maintenance Plan for the coal region does include maintenance of some lines not used for coal traffics, the derivation of QR's proposed reference tariffs exclude these maintenance costs. Further, in developing the reference tariffs, the maintenance costs of the coal lines are reduced to reflect the incremental maintenance costs associated with non-coal traffics. In this sense, the QCA's recommendation mimics the approach that QR has already adopted.

In assessing the incremental cost for non-coal traffic, the QCA has correctly identified that QR uses a general assumption that 40% of track maintenance is variable with gross tonne kilometres. However, in noting there is a range of factors not adequately captured by QR's approach, the QCA appears to have misinterpreted the provisions of the Costing Manual. Specifically, where a non-coal traffic requires a higher track standard than the coal traffic, the above general assumption will not apply, and the cost associated with maintaining that higher track standard is assessed as part of the incremental cost of that non-coal service. This is consistent with the approach the QCA has adopted.

*Cost effectiveness of QR's infrastructure maintenance:* QR is disappointed and concerned the QCA and RMS have failed to amend factual inaccuracies that were contained in the draft working paper and these inaccuracies continue to be represented in Working Paper 7. QR believes these inaccuracies contribute to a misleading impression and possibly an inappropriate expectation by stakeholders regarding QR's maintenance practices and the achievable efficiency gains.

QR's detailed response to Working Paper 7 is included in Appendix 3 of QR's submission. The major issues of contention are:

- RMS' assertion QR prematurely undertook a wholesale relay of the Goonyella system due to the risk of vertical split head (VSH) rail failures is incorrect and misleading, and gives the impression that QR manages maintenance and replacement of infrastructure in a reactionary and overly conservative manner;
- the validity of many of the comparisons RMS has made with other Australian railways is questionable;
- the comment by RMS on the problems resulting from coal adhering to the wheels and causing impact damage to the rail during transit is incorrect and creates a misleading impression that QR has invested in a wagon fleet that is inappropriate in the context of its coal operations;

- RMS' interpretation of QR's ballast cleaning strategies, in particular the statement that QR is ballast cleaning on the Goonyella system at a frequency of once in every 5 to 6 years, is incorrect; and
- RMS' assessment of QR costs in comparison to contractor costs are often mistaken. Examples cited by QR include QR's superannuation contribution for its staff and the review of rail grinding efficient costs.

As a result, QR cannot accept RMS' conclusions in relation to the estimate of efficient cost and is concerned the QCA has accepted the views of RMS despite the deficiencies that have previously been brought to the QCA's attention.

QR's assessment of what is an efficient level of maintenance costs is on the basis that maintenance costs can be broadly divided into two categories:

- major maintenance activities, which are generally highly mechanised activities undertaken by specialist gangs; and
- routine maintenance activities, which are typically provided by local gangs.

Each of these categories, major maintenance and routine maintenance, represent approximately 50% of QR's total maintenance costs.

QR believes that its major maintenance activities are generally undertaken in a well planned and highly efficient manner. QR considers there is minimal scope for efficiency gains in the majority of these activities. Based on investigations undertaken by and on behalf of QR, it is QR's view that out-sourcing these activities will not result in significant savings.

QR accepts there is the potential for savings in its routine maintenance activities and agrees that, overall, an efficiency improvement of 15% is achievable over the three year regulatory period. However, QR considers reductions in routine maintenance beyond this will result in reductions in the service quality that QR can provide to railway operators. Specifically, reductions in routine maintenance costs of greater than 15% are likely to result in:

- longer response times for repairs to infrastructure (eg signals, electric overhead);
- longer periods of imposed speed restrictions, as there will be less local resources available to provide immediate maintenance;
- longer train cycle times due to increased number of speed restrictions;
- revised routine maintenance strategies that focus on programmed maintenance activities only; and
- higher levels of operational risk.

Across all of QR's maintenance activities in the central Queensland coal region, QR considers a reasonable estimate of the savings that QR could achieve if it were to outsource its maintenance activities is approximately 7.5%.

**RTBU** - the QCA's determination of a level of inefficiency in the maintenance of QR's coal corridors at approximately 15% reflects a confused approach to the accounting treatment of maintenance expenditure and infrastructure upgrading or renewal.

The QCA has apparently assumed that the budgeted expenditures for so-called 'network maintenance' and 'network development' are all 'expenses'. The RMS report commissioned by the QCA questioned the level of expenditures planned by QR, and has suggested that the current budget could be cut by 15%, partly by deferring work on track replacement or re-sleeper for several years, and partly by some highly contestable and potentially inflammatory proposals concerning employment arrangements. The consultant then 'determined' that QR has a level of inefficiency of 15% - and has effectively cut QR's access charges accordingly.

In the process, QCA has apparently overlooked or ignored the statement by that same consultant that QR's 'maintenance plan' and its Network Development Plan both include activities that may for accounting purposes be classified as capital expenditure or recurrent expenditure (page 24) and that capital works have become an inseparable part of the maintenance activity and the terms are used interchangeably with operating maintenance (page 2).

Note that major elements in these proposed savings simply arose by *deferring* asset renewal in the short term.

In any event, the consultant was undertaking a largely hypothetical exercise – to identify efficient costs' – and in the process assumed away resource constraints (such as the fact that QR had one track laying machine which was committed for three years on one project). The additional costs of utilising contractors or purchasing additional TLMs were not explored by the consultants. Yet the supposed difference of 15% between QR's budgeted expenditure and the consultant's estimated 'efficient' expenditure appears to be based on the assumption that an 'efficient' operator would not be subject to any such constraints.

In other words, the optimum maintenance program from an engineering perspective may not be the optimum maintenance program from a financial management perspective – simply because 'resource constraints' may be real, and can not just be assumed away.

Other observations from the consultant about opportunities for cost-cutting are contentious and provocative. Implementation would involve a dramatic shake up in QR's industrial relations approach to QR's infrastructure workers. The consultant's report calls for greater flexibility of employment, noting that 'despite the opportunity for the flexibility in workforce arrangements, QR policy has been to decrease the number of fixed term and casual appointments and the existing employees in these categories have been made permanent'.

Changes as suggested by the consultant would inevitably have severe industrial consequences and be self defeating. Indeed, those recommendations fail to reflect an understanding of:

- the extent of work practice changes impacting on infrastructure workers in Queensland during the last five years;
- the nature of the enterprise bargaining system between employers and unions;
- basic facts concerning the wages, conditions, and work practices of infrastructure workers across Australia (the similarities and differences between infrastructure workers wages, conditions, and competency based classification structures in different rail systems and companies in different states and within states);
- industrial provisions for 'transmission of business' which provide for wages and conditions not to be reduced if work is contracted out;
- growing community concern about issues relating to job insecurity associated with contingent forms of employment eg casual and fixed term.

The consequences of the QCA's Draft Decision may drive cost-cutting within the QR to a level which compromises safety.

The QCA has failed to elaborate on how it came to hit on the figure of '15% in-efficiency' and it would be extraordinary if the QCA had relied entirely on the judgements of a single consultant (no matter how reputable) without further investigation of engineering issues and the feasibility or realism of cutting budgets for infrastructure maintenance, repair and renewal.

Some of RMS' proposals (for example, maintenance savings likely to be enjoyed by increasing ballast depth on some sections of track) do not appear to be accepted by QR's engineers.

**FreightCorp** - as a general comment, FreightCorp agrees with the QCA's assessment of the stand-alone costs. The only exception to this is the assessment of maintenance costs.

FreightCorp recommends the QCA review the change in O&M cost forecasts by QR in order to ascertain why an increase is justified at this time, and if not, to adjust either the asset values or future O&M costs accordingly.

**Stanwell** - the QCA accepts stand-alone cost, defined in terms of an efficient operator, as the upper bound for access charges. Pricing at stand-alone cost requires a hypothetical replacement of the facility. If it is already known this is not feasible, it follows that the prices for rail services should range only from incremental cost to something less than stand-alone cost. In the absence of such detail, SCL would submit access charges should logically be set at incremental cost (the lower bound to the price range).

#### *Regional and system-wide costs*

**QR** – remains concerned that the QCA has misunderstood QR's position on regional and system wide costs. While QR had proposed to use the 'total' regional and system wide costs identified through this allocative approach, it would be incorrect to state that the allocations reflect QR's estimate of the stand-alone costs for each item within the regional and system wide costs. QR has always maintained there are pluses and minuses on individual items that will occur through using these allocated costs compared to a ground up assessment of stand-alone costs. Given the time required to undergo a comprehensive ground up assessment of stand-alone costs, and the inevitable subjectivity of such an analysis, QR was prepared to adopt the total costs that were allocated to the coal regions under this approach as a proxy for stand-alone costs.

The QCA's recommendations have altered some of these allocators, with the impact that QR will only be able to recover a lower amount of regional and system-wide costs from the Central Queensland coal services. QR is concerned the resulting cost that can be recovered from these coal services is less than what will reasonably be incurred in providing this service.

The allowance QR had proposed for train control costs (accepted by the QCA in its Draft Decision) was based on the allocated below-rail costs taken from QR's actual costs incurred in the provision of these services as part of an integrated scheduling and train control function.

QR notes there will be costs associated with the organisational restructure separating the above and below rail aspects of the scheduling and train control function. Although it is acknowledged the QCA accepted QR's estimated train control costs on the basis of the QCA's assessment of stand-alone costs, QR is of the view the QCA has underestimated the scheduling and train control costs that would be incurred in the provision the coal network on a stand-alone basis. In particular, QR considers the QCA has overlooked the significant costs associated with activities such as weekly and daily scheduling, performance monitoring (that is monitoring the extent and cause of delays on the network, a role which will become increasingly important as other railway operators gain access), and safe-working and incident management.

Also, it is apparent that, with the advent of the regulatory regime, QR will be facing quite significant costs associated with compliance, performance monitoring, and audit that it has not incurred previously and which are likely to exceed previous expectations. It is QR's view the QCA's assessment has failed to adequately incorporate such costs (including the risks of major unforeseen costs) and the QCA should be more willing to give the benefit of the doubt to QR in these circumstances.

QR is prepared to accept the QCA's working capital allowance in lieu of incorporating working capital assets in the asset base.

### ***QCA's analysis***

#### *Stand-alone assets*

QR believes that the QCA has inadvertently double-counted the extent of assets that should be excluded from the Blackwater system to reflect the stand-alone operation of coal services. It is critical of the QCA's approach, particularly in respect of the Blackwater system.

The QCA maintains that its approach is consistent with the determination of reference tariffs for a stand-alone coal system. By way of background, it is important to understand the nature of the Blackwater system. Basically, it comprises two components:

- the duplicated north coast line, for which coal trains account for approximately 40% of movements on this line; and
- the line west of Rockhampton which is predominantly single track and passing loops. This track accommodates approximately half as many trains as the north coast line. Coal trains comprise about 80% of the movements on this track.

QR agreed with the QCA's decision to excise approximately 50 kilometres of track between Callemondah and Rocklands as part of the optimisation process in the identification of a DORC-based asset valuation. In making this judgement, the QCA has been conservative in allowing greater track duplication than is necessary. Analysis undertaken by its consultants revealed that the Blackwater coal traffic could be accommodated with something between the original passing loops (at a minimum) and the removal of approximately 50 kilometres of track as QR has proposed.

Clearly, this track would not be duplicated were it only to accommodate the traffic that operates west of Rockhampton. Given that incremental capacity costs fall dramatically once track has been duplicated, the approach of deducting incremental capacity costs of non-coal traffic would provide a poor basis for the assessment of stand-alone cost.

However, QR asserts that reducing its allowable revenue by the incremental capacity cost of non-coal traffic on the central Blackwater line is, in asset valuation terms, tantamount to reducing the duplication on the track by approximately 25-30 kilometres. It believes that, in doing this, the QCA has optimised the system to a point where infrastructure is not sufficient to sustain current coal train services and existing performance levels.

The QCA's modelling suggests that on the optimised network, sufficient capacity will be available to service both coal and non-coal traffic on the Blackwater system. However, it also revealed that as coal reserves were further developed, capacity increments would be required. Accordingly, there was a need for incremental capacity charges to be levied and these have been estimated to be \$500 per standard train path (STP).

The QCA is of the view that non-coal traffics should be levied the same incremental capacity charge per STP that applies for coal traffic where this provides a realistic indication of the opportunity cost of capacity. In this regard, a coal-only Blackwater system would not be configured differently to the existing system west of Rockhampton (although clearly with less capacity) so that the forward-looking incremental cost provides an appropriate basis for the assessment of stand-alone cost. Accordingly, in the calculation of reference tariffs for the Blackwater system, the revenues generated by this charge for non-coal trains were taken into account in quantifying allowable revenues.

The QCA has calculated the total cost of this charge for non-coal traffic and accordingly the total revenue for the Blackwater system has been reduced by this amount.

#### *Maintenance costs*

In relation to maintenance costs, QR has identified two issues:

- inconsistencies in the QCA's comparison of historic and forecast maintenance costs; and

- disagreements in respect of the QCA’s cost effectiveness study of QR’s infrastructure maintenance.

### Consistency of analysis

QR is concerned that Table 12.2 of the Draft Decision, which compares QR’s historic and forecast maintenance cost for the coal region is misleading. It claims that, while maintenance costs have risen in 1999-2000 due to the proposed ballast cleaning programme, the actual increase is not as significant as that which is reflected in the Table. In QR’s view, there is inconsistency in the data which the QCA has used to compile the series. In particular:

- the forecast costs are for the entire Central Queensland region (including line-sections not used for the carriage of coal) while the historic costs are only for the coal-carrying line-sections;
- while a Voluntary Early Retirement Scheme (VERS) allowance is included in forecast costs, VERS costs are not incorporated in the historic series; and
- the costs associated with the maintenance of ISG facilities is included in the forecast costs, but not in the historic costs (as they were previously treated as regional costs).

**Forecast costs** - the QCA has attempted to ensure that the historic and forecast maintenance cost series are as consistent as possible. It maintains the view that QR’s forecast maintenance expenditure in the coal region represents a marked increase on historical levels.

The data used to generate historic costs were obtained from QR and are for the regions identified as Moura, Blackwater, Goonyella and Newlands. Therefore the assertion that the information only relates to coal-carrying line-sections is incorrect.

**VERS** - while the QCA acknowledges that its historical series did not include an allowance for expenditure on early retirement programmes, it believes that such a component is insignificant. QR has provided limited data on the breakdown of these costs, which for the below-rail component of the state-wide network was only \$5.8 million in 1998-99. The QCA is of the view that only a very small portion of these funds would be associated with the coal network.

**ISG maintenance costs** - in deriving the actual maintenance cost series, the QCA included an allocation for regional costs. Consequently, an adjustment was made to incorporate these costs, which include the maintenance expenditure on ISG facilities.

### Cost effectiveness of QR’s infrastructure maintenance

The QCA retained RMS to assess the difference between QR’s forecast maintenance costs and an efficient level of maintenance costs for the Central Queensland coal network. In conducting this study, RMS obtained information from QR and interviewed staff from QR and a range of rail contractors. Consideration was also given to practices adopted elsewhere in the Australian rail industry. A draft copy of the report, which identified cost savings of up to 35%, was provided to QR and subsequent comments made by QR were considered before the final report was included in the Draft Decision as Working Paper 7.<sup>1</sup>

The Working Paper concluded that cost savings of at least 15% over a three year period could be expected if QR were to outsource infrastructure maintenance on a competitive basis or to make changes in the efficiency of its own operations. Taking account of relevant public interest

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<sup>1</sup> The Cost Effectiveness of Queensland Rail’s Infrastructure Maintenance in the Central Queensland Coal Systems.

considerations, the QCA considered that it was not appropriate to adjust estimates of efficient maintenance costs to take account of all of the elements of possible cost reductions considered in the working paper, for example, through reductions in QR's award wage rates or changes in award conditions. Given the conservative nature of the 15 per cent estimate, the QCA considers that QR could achieve the cost savings without moving away from the industrial award rates it currently pays to its maintenance work force towards rates applicable to out-sourced suppliers.

**Inaccuracies in the Working Paper** - in its submission, QR states that identified factual inaccuracies in the draft Working Paper were not subsequently amended. Moreover, QR contended that these errors provide a misleading impression and possibly an inappropriate expectation by stakeholders regarding QR's maintenance practices and achievable efficiency gains. In this regard, QR cited a number of major examples:

- the basis for the relay of the Goonyella system;
- the validity of comparisons with other Australian railways;
- comments made about coal contamination and impact damage to the rail;
- the analysis of QR's ballast cleaning strategy, particularly on the Goonyella system; and
- the assessment of QR costs in comparison with contractor costs.

In conducting its maintenance efficiency study, RMS afforded QR the benefit of a reasonable doubt in many instances. Where information available to RMS, from both QR and private sources, was incomplete and even conflicting, a conservative judgement was made to adopt the lesser of any potential efficiency gain that may be realised.

QR's comments on the draft report were considered and resulted in a number of changes being made before the final report was completed. However, in some instances, RMS was not satisfied with QR's arguments and, on the basis of its own research, chose not to implement the proposed amendments.

*Relay on the Goonyella system* - QR claims that, while the issue of VSH defects was a potential hazard, RMS is incorrect in emphasising this issue in regard to the decision on the Goonyella relaying project. On the contrary, RMS contends that QR's report which justified the expenditure stated that the critical issue in the decision to re-rail was the VSH problem. RMS sighted this report but was not permitted to retain a copy of the document.

RMS's conclusion in relation to the premature wholesale relay is based on two points. Firstly, there appeared to be an adequate system in place to identify and manage defective rails. RMS obtained statistics for the number of incidents due to VSH and any other rail defects on the Goonyella system. These showed that, for the 5-year period up to June 1999, there were no such occurrences. The conditions which contributed to serious VSH-related incidents on the North Coast line did not appear to be present on the Goonyella system. In other words, there was no evidence of large scale nor even moderate scale breakdown of rail. RMS recognised that rail replacement would be necessary sometime in the future, but given the refined ultrasonic defect detection methods and rail management being employed on the system, rail replacement could be deferred. Secondly, QR's own estimate, in 1999, stated that the remaining fatigue life of understrengthened concrete sleepers on the system was 20 years. Consequently, RMS concluded that the wholesale relay was premature.

*Comparisons with other railways* - QR questioned the validity of comparisons made between QR and other Australian railways. It distinguished QR's coal operations in terms of gauge, climate, traffic density, track curvature and track sub-grade.

The major comparison made in the Working Paper was in regard to a benchmark measurement of the labour required for routine maintenance activities. RMS enquiries suggested that 20-25 kilometres/man was a reasonable benchmark for lines in the central and western parts of Australia. But taking into account climatic factors and soil conditions in Central Queensland, 15 kilometres/man was determined as a more conservative figure.

Further, QR had maintained that given the isolation of the network and the nature of the commodity being transported, the coal system should be seen as a special case and that the unit rates for work should reflect this. However, all contractors that RMS interviewed considered that this could not be justified in view of the network's relative proximity to major townships in Central Queensland.

*Impact damage and coal contamination* - QR was concerned with comments about the problems resulting from coal-related impact damage to the rail. RMS did not imply that QR had invested in rollingstock inappropriate in the context of the coal operations. Rather, it sought to understand the potential for wheel and rail damage and suggest how this problem could be minimised. RMS stands by its assertion that rail damage occurs because wheels pick up coal and later impact the deposits onto the rails.

In addition, since the report RMS has noted that some measures have been introduced to reduce the possibility of contamination on the coal network. Specifically, QR has:

- implemented profiling practices on rollingstock;
- trialled the application of surfactants to prevent wind-blown coal; and
- introduced a system of monitoring the unloading process so as to minimise the incidence of coal build-up around the rail and the subsequent ploughing that may occur.

*Ballast cleaning strategies* - QR has criticised RMS's assessment of its ballast cleaning strategies, particularly on the Goonyella system where the QCA's consultant concluded that this task would be undertaken every 5 to 6 years.

Working Paper 7 made reference to the large program of ballast undercutting planned for the Goonyella system during the 10-year maintenance plan horizon. It identified that QR intends to ballast undercut 725 kilometres of track. Given that the track length in the Goonyella system is approximately 634 kilometres excluding balloon loops,<sup>2</sup> simple arithmetic suggests that some parts of the system will be ballast cleaned more than once over this time. However the extent of this is compounded when consideration is given to those obvious parts of the system that will not require cleaning:

- approximately 100 kilometres of track had been recently cleaned before the commencement of the program;
- approximately 200 kilometres of track receive less than 10 million gross tonnes per annum; and
- sections of the track have only been constructed or relayed in the last decade.

On this basis, RMS maintains its conclusion that either QR has overestimated the amount of ballast cleaning necessary, or the ballast has been so badly contaminated that the effective life of the asset has been reduced prematurely.

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<sup>2</sup> Ballast cleaning is not necessary in balloon loops because, in these sections, train speed is so slow that higher standards of track geometry quality is unnecessary.

The QCA has only dealt with this issue in the context of asset valuation where an adjustment has been made to the value of the ballast on account of the asset's condition being inconsistent with its age. No attempt has been made to consider an adjustment in respect of maintenance efficiencies.

*Contractor cost comparisons* - QR believes that RMS has erred in comparing contractor costs with those that it incurs, and cites QR's superannuation contribution for its staff and the review of rail grinding efficient costs as examples. In its draft report, RMS identified QR's superannuation contribution for its staff as 15%. On QR's advice, this figure was reduced to 12.75% prior to the final report. However, QR has submitted that the average superannuation contribution is 9.5%, with the majority of field staff covered by RailSuper with a contribution rate of 8.5%. RMS' research has revealed that, as the turnover of staff has been very low, many field staff are still subject to the old QSuper rate of 14.65%, and consequently, 12.75% is a more representative average.

QR's cost forecasts can be broadly broken down into 3 components:

- direct costs spent in the field;
- management fees incurred by ISG; and
- Network Access' costs incurred in managing the contract with ISG.

RMS agreed with QR's assessment of rail grinding efficient costs (category 1). These compared favourably with costs provided by contractors. However, it considered that the management fee premiums applied to those unit costs (categories 2 and 3) were unreasonable.

ISG's costs are those associated with the ISG organisation and the management of direct costs. They include those costs expended in carrying out budgeting, program co-ordination, employee resources functions, material acquisition, interface concerned with network accessibility, cost reporting and training.

Whilst not specifically quantified by RMS in its review, it is apparent that Network Access' fees are imposed to manage the ISG contract. This is an internal QR contract that sets out the rates and work to be performed for the budget year. Network Access administers these contracts and evaluates strategies for maintenance and upgrades.

Given this structure of management, RMS contends that there is a duplication of supervision fees. The existing structure has arisen due to QR's integrated structure and subsequent complexities of the above and below-rail business which QR is engaged in. This has complicated the decision-making and administrative processes for the coal operations.

RMS is of the view that, on a stand-alone basis, the coal system would need much less management and administrative effort. In this case, the administrative structure may be more akin to the WestNet system recently created in Western Australia where the entity operates as a discrete company, able to make its own decisions about working arrangements and investment.

RMS has noted in its report that the budget process imposed on the coal system is identical to that imposed on the wider QR network. This is not considered appropriate for the coal network where the timing of investment and recurrent budget outcomes is more critical given the higher rate of infrastructure deterioration. In a stand-alone system, the budget would not be dependent on year to year budget outcomes as it is now, but would be longer term in nature, taking account of the quickened pace of infrastructure damage. In this environment, recurrent budgets could be committed in a 5-year plan, for example, at least in harmony with expected revenue from the coal operations.

**QR's maintenance cost assessment** - QR disagrees with RMS's assessment of the efficient level of maintenance costs. In its own analysis, it breaks down maintenance activities into two components, each contributing equally to overall maintenance costs:

- routine maintenance activities, generally provided by local gangs; and
- major maintenance activities, which are highly mechanised and undertaken by specialist gangs.

In QR's view, there is potential for a 15% efficiency improvement in its routine maintenance activities over the regulatory period. However, any maintenance reductions beyond that would be likely to reduce the quality of service that is provided to above-rail operators. In addition, QR considers that its major maintenance activities are generally undertaken in a well-planned and highly efficient manner and therefore it concludes that there is little scope for efficiency gains in the majority of these activities. Accordingly, across all of its maintenance activities in the Central Queensland coal region, QR argues that 7.5% is a more reasonable estimate of cost savings that could be achieved.

The QCA's paramount concern in the identification of an efficient level of stand-alone maintenance costs was to remove the risk that cost reductions could be associated with the deterioration in service quality and safety.

RMS' draft report suggested the presence of up to a 35% efficiency gap in QR's maintenance figures. However, for the purposes of the final report, the QCA deliberately chose to limit the scope of the analysis of QR's work practices and subsequently, efficiency estimates were adjusted to remove almost all scope changes. Consequently, RMS's proposal of a 15% efficiency gap is conservative in light of the wider analysis conducted.

The QCA notes that QR, in its assessment, has made no reference to the management overhead incurred by its major maintenance activities. In the QCA's view, this is a major source of inefficiency in QR's operations. RMS identified that unit rates are close to competitive levels without the addition of the management fees.

The QCA considers that the 10-year maintenance plan shows little evidence of strategies to improve the efficiency of maintenance activities. In its submissions, QR has identified productivity-enhancing initiatives such as the purchase of a new ballast cleaner, anti-contamination measures, the restructuring and multi-skilling of track-side systems and competency and supervisory training. However, the overall maintenance plan shows no evidence of the incorporation of these improvements. In general, each year's plan tends to mirror that of the previous year.

**Summary of QCA's maintenance cost assessment**- the QCA maintains a 15% improvement in the efficiency of QR's maintenance services is feasible. This improvement could be sourced from any or all of the following components:

- routine maintenance (including management fees)
- major maintenance (including direct costs and excluding management fees)
- management fees and overheads (for all routine and major maintenance)

The QCA recognises that the scope for efficiency gains varies across the above components, with management fees and overheads providing the greatest scope for gains and major maintenance the least.

QR has made no comment about the efficiency gains possible in management fee and overheads. The QCA considers that this is an area of major inefficiency in QR's operations and gains of up to 50 % are possible.

QR has suggested that a 15% improvement in efficiency over a 3-year regulatory period is available in routine maintenance, however, the QCA considers there are greater gains than this potentially available.

QR has suggested that there is no opportunity for efficiency improvement in major maintenance (excluding the management fee). The QCA accepts there is only a small potential for cost efficiencies in this area relating to the direct cost components, such as the cost of providing resurfacing and rail grinding.

The QCA considers it is ultimately a management decision for QR as to where the efficiency gains are sourced from the above components. Nevertheless, the QCA continues to take the view that 15% is a conservative estimate of the current level of inefficiency in maintenance services on QR's coal corridors.

#### *Regional and system-wide costs*

QR has raised concerns as to the level of regulatory compliance costs approved by the QCA. In the Draft Decision, the QCA permitted QR half of its claim of \$1 million per year over the 3-year reference tariff period for additional regulatory compliance costs for Network Access as a whole (that is, in addition to QR's historical regulatory compliance costs recognised through the allocation process). In addition, Network Access was afforded an allowance for systems development and contingencies in the coal region of \$1 million in each year of the reference tariff review period.

In its submission, QR argued that, with the advent of the regulatory regime, Network Access will be facing significant costs associated with compliance, performance monitoring and audit, which it has not incurred previously and which are likely to exceed previous expectations. However, no transparent claims for additional funds were incorporated in the document. QR has requested the QCA to take a 'benefit of the doubt' approach in these circumstances.

The QCA believes the funding that it has allowed QR for regulatory compliance purposes is sufficient.

QR calculated its original forecasts for the cost of train control in the coal system on a stand-alone basis through an allocative process. At this time, the service was part of an integrated scheduling and train control function within QR. These costs were verified by the QCA's consultant, Dick Bullock, and accepted as part of the Draft Decision. However, the QCA's own independent estimate of the costs of a stand-alone scheduling and train control function for the coal region was less than that proposed by QR. The QCA took a conservative view and accepted QR's estimates, given the estimates were reasonably close.

Following the organisational restructure which reassigned the scheduling and train control functions for the coal network to Network Access, QR has taken the view that the allowance provided in the Draft Decision no longer reflects a realistic assessment of the stand-alone costs of providing the service. In particular, it considers that there are significant costs associated with activities such as weekly and daily scheduling, performance monitoring and safe-working and incident management that were not previously accounted for. However, QR has not provided any transparent costing forecasts in respect of these. The QCA's stand-alone cost estimates already included allowances for these functions.

The QCA believes that QR has been allocated sufficient funds to develop new systems which arise from the need to comply with the additional regulatory requirements. (This has been discussed above). However, additional monies have been allocated to Network Access for contingency purposes. It is the QCA's view that these funds could be used for the purpose of transitioning and implementing stand-alone train control processes. Furthermore, the QCA believes that over time, the costs of providing the scheduling and train control function are likely to fall as new economies emerge from its integration within Network Access.

QR's final concern related to the allocators that the QCA applied to estimate non-maintenance operating expenditure. However, the QCA maintains the position in the Draft Decision that the allocators it applied were more cost reflective than those suggested by QR. The QCA's application of these allocators generated an outcome that was at the upper end of a reasonable bound of the QCA's estimated stand-alone cost. Accordingly, the QCA has not altered its position as expressed in the Draft Decision.

***QCA's position***

**In assessing reference tariffs, the QCA has:**

- 1. assigned to non-coal traffics the incremental capacity costs associated with the paths those trains consume;**
- 2. assessed stand-alone maintenance costs on the basis of the costs that would be incurred by the railway assuming it only carried coal traffic;**
- 3. assessed the current level of inefficiency in the maintenance of QR's coal corridors at approximately 15%; and**
- 4. estimated the system-wide and regional cost components of stand-alone cost on the basis of an allocation of QR's costs as set out in Table 12.5 of the Draft Decision.**