

Chapter 11 - Demand Forecasts

KEY ASPECTS

Demand forecast – the QCA has rejected QR's revised coal outlook and has adopted the conservative demand forecasts provided by Asia Pacific Coal Services.

Other traffic activity levels - activity levels for the other components of the tariff structure have been forecast, based on the operation of the reference train service and the use of individual mine-by-mine trip lengths.

11.1 Introduction

Forecast activity levels form an important component of the assessment of QR's reference tariffs. This is primarily because a rail network exhibits significant economies of density. This means that as traffic levels rise, total costs increase, but not in proportion to the increase in traffic levels.

Consequently, increasing activity levels allow prices to fall whilst still providing sufficient revenue for QR to earn a reasonable return on its asset base and recover its operating costs. The extent to which forecast volumes understate (overstate) actual traffic levels resulting in QR exceeding (falling below) expected revenue levels depends on whether price or revenue caps are to be applied to QR. Revenue cap arrangements will ameliorate these impacts relative to price caps.

11.2 Forecast traffic volumes

Background

The QCA identified appropriate 10-year coal haulage forecasts to utilise in its assessment of QR's reference tariffs. However, in light of developments in the coal industry, the Authority committed to reviewing these forecasts at the time of the Final Decision, as more information became available.

Other activity levels used in the assessment would assume average haul lengths for each corridor and the operation of the reference train service.

Stakeholder views

Objectives in establishing demand forecasts

QR- is prepared to accept a demand forecast based on the assumptions used to derive the QR1 demand forecast for the purpose of assessing reference tariffs, subject to a number of caveats.

The demand forecast that is used in the assessment of reference tariffs is effectively the volume that QR requires to be railed in order that it can earn the revenue that is permitted by the revenue cap. QR considers that the approach taken in establishing demand forecasts for the reference tariffs should have the following objectives:

- provide an incentive for accurate demand forecasting by operators and by end-users; and
- pass volume benefits to customers when they are achieved, rather than on the basis of an expectation of future volume.

In addition, under the proposed regulatory framework, volume volatility does create a significant risk for QR's financial position. QR must make allowances for the diversifiable volume risk in its volume forecasts.

Estimate of net tonnes used in reference tariff determination

QR - the QCA has proposed to accept the QR1 forecast, but review these forecasts prior to its Final Decision. QR presumes that this means the approach QR adopted in developing this set of forecasts, which was based on a probability factor being applied to forecast railings under contract, is considered reasonable, but the QCA wishes to ensure the expected railings reflect best possible information available at the time of the Final Decision. QR accepts this recommendation, subject to the following matters.

QR's approach in developing the QR1 forecasts recognises volume risk as well as providing an incentive for reasonable demand forecasting by operators and end-users. However, it does not in itself ensure that volume benefits are passed to customers within a reasonable time of when those benefits are achieved.

QR believes volume increases beyond the reference tariff period (which is initially being set at 3 years) should *not* be incorporated for the purpose of assessing the reference tariff (that is, the reference tariff assessment should assume the volume in years 4-10 equal to the average volume in years 1-3). The inclusion of such volume increases beyond the reference tariff period will have the effect of lowering the reference tariffs in the current period on the basis of anticipated volume increases in later periods. This passes the benefit of volume increases to users substantially earlier than when the benefits are actually achieved and, as a result, significantly increases the volume risk borne by QR.

QR's proposed approach will not cause disadvantage to end-users as, in the next reference tariff period, in the event that the volume increases are still expected to materialise, the reference tariffs will be reduced to take account of those volume increases. Effectively, this approach allows the tariff to more closely track the impact of the change in volume and will also be reflective of industry expectations that, as volume increases over time, the reference tariff will concurrently reduce in real terms.

QR will reassess its demand forecasts using the methodology outlined above and the latest available information on expected railings under contract, and provide these to the QCA under separate cover.

FreightCorp - recommends that the QCA adopts forecasts for coal movements over the period covered by the Undertaking that more closely reflects industry expectations. Access charges would vary significantly from those contained in the Draft Decision (based on QR's 'QR1' forecast) if a different forecast was employed.

RTBU - the QCA has quoted selectively from consultant's reports, using the most optimistic result from its underlying assumption of a 30 per cent reduction in coal freight rates, and as such is not acting as an independent arbiter in this matter. This will have an impact on the maximum charges that the QR will be able to levy.

Queensland Government – the QCA has adopted QR's initial forecasts for the estimated traffic levels over the period of the Undertaking. Given the explicit relationship between the forecast traffic levels and the reference tariffs set by QR, the QCA should carefully monitor the veracity of the forecast traffic volumes.

Estimation of other parameters

RTBU - agrees with the QCA's recommendation that the other parameters for the calculation of the reference tariffs (that is, train paths, gtk, ntk) be calculated by assuming the weighted average haul length for each corridor and the operation of the reference train service for each origin-destination pair.

QCA's analysis

In its submission on the Draft Decision, QR committed to reassess its demand forecasts using the latest available information on expected railings under contract. These forecasts, denoted QR3, were received by the QCA in May 2001. They are depicted in Table 11.1.

Table 11.1: QR's forecasted tonnage profiles – QR3

Clusters	QR3 Tonnage Profile (million tonnes per annum)			
	2001-02	2002-03	2003-04	2004-05
Moura	9.8	9.9	9.9	9.9
Newlands	8.8	8.8	8.8	8.8
Blackwater Central	19.1	19.3	20.0	20.0
Stanwell	3.1	3.1	3.1	3.1
Gregory (Blackwater)	14.2	14.2	14.2	14.2
Gregory (Goonyella)	2.0	2.0	2.0	2.0
North Goonyella	29.1	29.7	30.0	30.2
South Goonyella	28.5	28.5	29.8	29.8
West Goonyella	11.0	11.0	10.5	10.5
Total	<i>125.5</i>	<i>126.5</i>	<i>128.3</i>	<i>128.5</i>

Initially QR only provided forecasts for the 3 years that the reference tariffs were intended to apply. It did not consider that volume increases beyond the 3-year reference tariff period should be incorporated, as, in QR's view, such an inclusion would have the effect of lowering reference tariffs in the initial period on the basis of anticipated volume increases in later reference tariff periods.

On the assumption that the regulatory period would be extended to 4 years, the QCA requested that QR provide forecasts for 4, rather than 3 years.

QR considered that, for modelling purposes only, the volume of the remaining term of the model should reflect the average volume within the reference tariff period. This would therefore not reflect a 'forecast' of tonnage for those years, but rather represent a 'tonnage assumption'. This series is depicted in Table 11.2.

Table 11.2: QR's coal freight task forecasts and assumptions – QR3

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
QR3 million tonnes	125.5	126.5	128.3	128.5	127.9 ¹	127.9	127.9	127.9

The QCA rejects QR's averaging approach and has assumed constant tonnages from 2004-5 onwards for the purposes of determining reference tariffs. Any growth in the latter years is not reflected in lower reference tariffs in the initial regulatory period. In the Draft Decision, coal forecasts were based on the then haulage rates continuing to apply. However, with the enormous growth that the Queensland coal industry was experiencing at the time, it was noted that forecast annual volumes for the regulatory period could possibly be exceeded in the 2000-01 financial year.

¹ The QCA has made an adjustment to the simple arithmetic average to account for the fact the Moorvale's average is based on a 2-year period commencing 2003-04.

Accordingly, the QCA decided to reassess coal forecasts in light of any new information that has become available since the time of the Draft Decision. Energy Economics (EE) and Asia Pacific Coal Services (APCS) were retained to undertake independent assessments of the forecast freight tasks for Queensland coal to 2008-09. The consultants each provided forecasts for base-case and conservative scenarios. These numbers, given in Table 11.3 below, may be used to verify QR's forecasts.

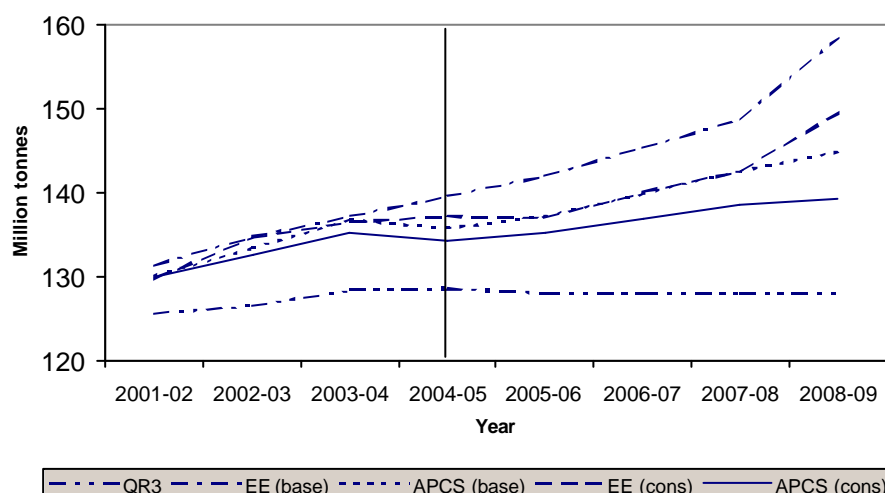
Table 11.3: Energy Economics and Asia Pacific Coal Services coal freight task forecasts

	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09
Base-case								
EE million tonnes	131.3	134.7	137.1	139.5	141.9	145.3	148.6	158.5
APCS million tonnes	130.0	133.3	136.7	135.7	137.1	139.8	142.5	144.8
Conservative								
EE million tonnes	129.7	134.6	136.4	137.1	136.9	140.0	142.5	149.5
APCS million tonnes	130.0	132.6	135.2	134.2	135.1	136.7	138.4	139.2

Both consultants are of the view that the Queensland coal market over the next 2-3 years will be constrained by supply factors with the world demand remaining strong. In the short term, coal suppliers are unable to increase capacity at a rate needed to supply the market. Hence, the consultants are confident that the tonnages forecast will be achieved.

Figure 11.1 compares the forecasts of EE and APCS with QR3.

Figure 11.1 : Coal Forecasts



For the entire term of the initial regulatory period, QR's forecasts are considerably below even the conservative levels expected by the two consultants.

Accordingly, the QCA proposes to reject QR's coal outlook and adopt APCS's conservative forecasts which are the lowest of those received from the consultants. The regulatory arrangements which relate to this are discussed in Chapter 16.

QCA's position

In assessing QR's reference tariffs, the QCA has adopted Asia Pacific Coal Services' conservative traffic task forecasts for the purposes of assessing forecast costs and unit rates of reference tariffs. The remaining parameters have been calculated by using individual mine-by-mine trip lengths and assuming the operation of the reference train service.