Chapter 16 - Incentive Regulation

KEY ASPECTS

Escalation - reference tariffs will be escalated each quarter by the CPI, less an efficiency factor (or X-factor) of 1.5% per year.

Choice of regulatory framework – QR has the option of a revenue cap or a price cap based on the amended demand forecasts.

GST - specific adjustments to the CPI may be necessary on account of the GST impact on the CPI.

X-factor - the calculation of reference tariffs in the future will be based on the X-factor reduction applying exclusively to the allocative component of the tariff structure.

Review - changes in taxes or laws or departures from volume forecasts of greater than 10% will trigger a review of reference tariffs.

16.1 Introduction

Any involvement in the market will have both intended and unintended consequences. If the intended consequences are overwhelmed by the unintended consequences, the interference may do more harm than good. For example, by allowing too low a rate of return, in an effort to eliminate monopoly profit, the regulator may create an environment in which the regulated business is unwilling to invest. The capacity restrictions that may result from the congested infrastructure could be more costly to users than the original monopoly profits.

Different regulatory approaches will assign rights and responsibilities differently to the affected parties. This assignment of rights and responsibilities will affect the regulated entity's risks and rewards and, in turn, its incentives. Accordingly, it is important, when considering alternative regulatory approaches to be aware of the potential unintended effects of the assignment of rights and responsibilities implicit in those arrangements.

Traditional rate-of-return (ROR) regulation allows for a regulated organisation to achieve a profit equivalent to an allowed rate-of-return on its asset base. Since rates are often set annually, ROR regulation creates a predisposition toward a 'cost-plus' approach to price setting. ROR regulation provides only limited incentives for the regulated organisation to use its superior information so that it may achieve efficiency gains throughout the regulatory period. Cost reductions achieved beyond those budgeted are simply passed on to customers in the next assessment period.

To address this shortcoming, incentive regulation recognises that an organisation will always know more about its business, and how to improve its business, than the regulatory body. Incentive regulation therefore seeks to provide a regulated organisation with an incentive to invest effort (and take the risks) necessary to improve its profitability and the quality of the service provided to its customers.

The incentive that is provided often involves allowing the regulated organisation to retain profits generated for a set period, on the basis that, in return, prices for the relevant products will fall by a predetermined amount in each year of the regulatory period. The key point is that, providing the regulated entity with the ability to retain the profit or value it creates through the regulatory period, an incentive for that organisation to reveal how efficiently it is able to operate.

The predetermined amount is normally established on the basis of prices increasing on account of inflation. In addition, at the end of the regulatory period, at least some of the additional profit may be returned to customers through lower prices. In this way, a 'win-win' environment can be created.

However, such an environment may be undermined if the regulated organisation believes its out-performance of the target during a regulated period will be immediately returned to customers at the end of the period. Accordingly, an inappropriate regulatory environment can jeopardise any incentive for a regulated organisation to improve its performance. This may reduce the regulated organisation's profitability in the short to medium term and defer, or eliminate, price reductions for customers in the long term.

The creation of an incentive regulation regulatory framework therefore requires the following matters be addressed:

- the price inflator to be applied;
- the quantification of the predetermined amount each year by which prices reduce;

- the benefit sharing arrangements that apply for out-performance during, or at the end of, the regulatory period; and

- the circumstances in which the prices charged can be reviewed within the regulatory period.

16.2 Type of regulatory framework to be applied to QR's reference tariffs

Background

The QCA endorsed an incentive-based regulatory framework and determined that price caps will form the basis of those arrangements. A 3-year regulatory period was proposed with the first period commencing on 1 July 2001.

Stakeholder views

> **QR** - the QCA's recommended adoption of a price cap approach to the regulation of QR's access arrangements for coal services in Central Queensland is acceptable provided the issues QR has raised in relation to its ability to effectively manage the resulting volume risk are adequately addressed by the QCA.
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> In principle, QR considers that a regulatory period of 3 years is unreasonably short, as it gives QR little ability or incentive to 'over-achieve' the regulatory targets within the timeframe, and will require that resources be continually devoted to the ongoing revision and updating of the various elements used to establish the reference tariffs (for example asset values, efficient operating costs, etc). However, given the immaturity of the current rail access regime, QR is prepared to accept the initial regulatory period being set at 3 years. However, this should not be used as a precedent for the establishment of regulatory periods in the future.
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> QR is concerned about the QCA proposing to nominate the commencement for this regulatory period as 1 July 2001. Neither the QCA's Draft nor Final Decision has any ongoing legal status and, as such, cannot be used to establish binding requirements on QR. QR considers the regulatory period (which in the context of QR's Undertaking is the term of the reference tariffs) can only commence from the date of approval of the Undertaking and acceptance of the reference tariffs.
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> Further, the adoption of a 3-year term for the reference tariffs from 1 July 2001 would result in the reference tariffs expiring earlier than the expiration of the underlying access Undertaking. The QCA's recommended approach would mean that the reference tariffs would be reviewed shortly before the expiration of the access Undertaking, with the result that, either the reference tariffs will be reset for a further 3-5 year period without the benefit of the review of the Undertaking, or the reference tariffs will only be reset for a period of 3 to 6 months.
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> **FreightCorp** – The QCA's preference for a price-cap based incentive regime seems in line with current best regulatory practice.

QCA's analysis

Three issues arise from submissions:

- the term of the Undertaking;

- the period for which reference tariffs should apply; and

- the form of regulation – that is, whether price caps or revenue caps should apply.

Term of the Undertaking

Given the immaturity and transitional nature of the above-rail market in Queensland, the QCA considers that a shorter, rather than longer period is more appropriate for the first regulatory period. QR has proposed a 3-year term for its Undertaking.

The QCA considers that there is likely to be a delay of between six to nine months in finalising and approving QR's Undertaking. Consequently, it is most likely that an Undertaking will be approved by the QCA in the first half of the calendar year 2002.

The QCA considers that it is most appropriate if the end of a regulatory period coincides with the end of a financial year. In other words, assuming the Undertaking was accepted in March 2002, the QCA considers the Undertaking should run until 30 June 2005.

The QCA also accepts QR's other comments concerning the term of the regulatory period and would be favourably disposed to longer terms for future regulatory periods.

Period for reference tariffs

QR has identified that the Final Decision on QR's Draft Undertaking has no ongoing legal status and that the role of the Final Decision is to provide the reasons for the QCA's refusal to accept the Draft Undertaking. Consequently, under the QCA Act, the Final Decision cannot be used to establish any binding requirements on QR. The QCA agrees with QR's view.

Nonetheless, the QCA is of the view that the Final Decision can potentially play an important part in access negotiations even before an Undertaking has been finalised. Moreover, the QCA is conscious of the time that has already been taken in the process of reviewing QR's Draft Undertaking and considers that a detailed position on issues, such as the quantum of reference tariffs, should be outlined in the Final Decision.

The publication of access charges in the Final Decision provides a clear response to those put forward by QR as part of the Draft Undertaking. In addition, the level of reference tariffs could be influential in future price reviews under QR's existing contracts. However, the issue arises as to the most appropriate period for the response to the reference tariffs submitted by QR.

The QCA considers it desirable that the publication of reference tariffs recognise the (approximate) 3-year term for the approved Undertaking whilst accommodating the lag involved in finalising the Draft Undertaking. Consequently, the combination of these factors means that the most appropriate period for the reference tariffs published as part of the Final Decision should be from 1 July 2001 to 30 June 2005 (that is, a 4-year period).

The proposal also ensures that the time-frame for review of reference tariffs is matched with all other aspects of the regulatory environment. However, if there is a substantial change in real interest rates over the period between the publication of the Final Decision and the approval of the Undertaking, then the QCA would consider reviewing reference tariffs at that time.

Price or Revenue caps

The key difference between price and revenue caps lies in the assignment of volume risk during the regulatory period. Under a revenue cap, QR is assured of a revenue stream, irrespective of the volume of throughput. This is accomplished by allowing (requiring) QR to increase (reduce) its charges in response to previous year's under (over) recovery against the prescribed revenue cap.

On the other hand, price caps establish a price level for the term of the regulatory period so that volume fluctuations are borne directly by the regulated entity's earnings at least during the regulatory period (demand forecasts tend to be revised in conjunction with each new regulatory period). Consequently, accurate demand forecasts are critical in the appropriate assignment of risk between QR and mine owners and the determination of regulated prices.

QR has expressed a preference to be regulated under a price cap arrangement with several measures being incorporated to alleviate its exposure to volume risk. Principally, these arrangements include:

- a volume collar[1] – so that reference tariffs are reviewed during the regulatory period if actual railings are more than 10% above or below forecast railings; and

- take-or-pay arrangements. The effect of QR's proposed take-or-pay arrangements (and those proposed in response by the QCA) is to introduce some protection to QR's cash flows in the event that railings are below forecast or are relatively volatile.

Chapter 11 identified significant differences in the demand forecasts between QR and the QCA's consultants with the consequence that the Authority declined to endorse QR's proposed demand forecasts for the purposes of assessing reference tariffs. Instead, the QCA adopted the most conservative of the forecasts put forward by its consultants.

However, imposing upon QR higher demand forecasts than those it put forward for the setting of access charges has significant ramifications for QR's legitimate business interests. For example, if these forecasts proved to significantly overstate actual throughput, then QR may fail to earn the stand-alone cost of the provision of access to its infrastructure.

Consequently, in Chapter 11, the QCA declined to endorse QR's proposed demand forecasts and instead adopted the most conservative of the forecasts put forward by its consultants. However, as part of these arrangements, the QCA proposes to offer QR a choice between:

- a price cap based upon the demand forecasts adopted by the QCA; and

- a revenue cap.

The QCA's key concern with the price cap arrangement lies in the uncertainty of demand forecasts. Demand uncertainty must be considered at two levels:

- the uncertainty associated with industry output being the number of tonnes that are mined. As indicated in Chapter 11, there is considerable disagreement as to the likely tonnage forecast for the next 4 years; and

- even if there was agreement on the likely tonnage forecasts, there is an additional layer of uncertainty created by virtue of the regulatory arrangements that are proposed to apply.

Uncertainty arises from the regulatory arrangements by virtue of:

- the multi-part tariff structure;

- the level of fringe charges; and

- revenue from the take-or-pay arrangements.

The first source of uncertainty arises by virtue of one of the parameters being the consumption of capacity by above-rail operators during the course of the regulatory period. If more train paths are consumed than were forecast, then QR will effectively earn a return that exceeds the stand alone cost of providing the network. Moreover, the QCA is yet to finalise its approach to

[1] QR's exposure to volume variations even under a price cap is limited to volatility within the regulatory period as forecasts would be reconsidered as part of subsequent reviews and the QCA has effectively assumed there is no further growth in railings at the end of the regulatory period for price modelling purposes.

calculating capacity consumption of non-coal trains and consequently this creates another uncertain parameter. At this early stage of the regulatory arrangements, there is very little that can be done to alleviate this uncertainty at least until the QCA's approach to capacity consumption is definitively resolved.

Another area of uncertainty concerns the level of fringe charges that will apply and the revenue that QR can reasonably expect to earn from those charges, such as medium term storage, additional charges for loading and unloading times etc.[2] QR has yet to put forward its view of the proposed charges for these services and the modelling that has been done to date has assumed that no revenue is earned. However, it highlights another area where QR can clearly earn a return that exceeds the stand alone cost of service provision. Yet another area of concern relates to the revenue generated through the take-or-pay arrangements (these arrangements were discussed in Chapter 10).

However, despite the uncertainty associated with the price cap mechanism, this form of regulation has the desirable attribute of encouraging QR to expand the system to accommodate additional demand. A price cap provides superior incentives to a revenue cap in this respect (at least up to the upper bound of the collar proposed by QR). Under a revenue cap arrangement QR does not have a financial incentive to accommodate additional throughput.

In weighing up the alternatives, the QCA considers that price caps provide more desirable incentives as they are more likely to encourage QR to expand the network to meet demand. However, the development of price caps requires resolution of demand forecasts for tonnage and the other relevant parameters. Having rejected QR's proposed demand (that is, volume) forecasts, the QCA considers measures must be taken to protect QR's legitimate business interests given its increased exposure to volume risk.

Accordingly, either of the following approaches would be acceptable regulatory arrangements for QR's Undertaking:

- price caps, based on:
  - the volume forecast endorsed in Chapter 11; and
  - returns in excess of stand-alone cost from the following charges being aggregated in net present value terms over the regulatory period, with those amounts deducted from QR's opening asset value at the beginning of the next regulatory review period:
    (i) capacity charges for paths attributable to the number of train paths actually consumed (not due to variations in forecast tonnes). For example, if 1.5 paths per train was assumed for the purpose of calculating reference tariffs for the Blackwater system and it is subsequently found that the trains in fact consumed 2 paths, the additional charges that should have been levied by QR for the forecast tonnes (as well as for any other traffic operating on the system) should be carried forward. However, revenue arising from variations in capacity consumption due to a greater volume of coal being transported on the system should be retained by QR so as to remain consistent with the underlying price cap approach;

[2] QR is also yet to submit charges for the use of its Kwik Drop Door (KDD) mechanism. However, the assets and operating costs for those systems have not been included as part of the cost base and accordingly will not affect QR's recovery (or over-recovery) of its stand-alone cost.

(ii) charges for other services provided by QR, including medium term storage, use of Kwik drop doors, and additional loading and unloading times; and

(iii) revenue secured through the application of take-or-pay arrangements; or

- a revenue cap apply to the arrangements with an unders and overs account. The unders and overs account would operate as follows:

  – if actual revenue was less than 5% above or below forecast revenue, then QR would develop reference tariffs to clear the account over the course of the upcoming year, assuming the previous financial year's demand would continue in the upcoming year; and

  – if actual revenue was more than 5% above or below forecast revenue, then QR would develop reference tariffs to clear the account over the course of the next 2 years, assuming the previous financial year's demand would continue in the upcoming 2 years;

  – a positive (negative) balance of the unders and overs account at the end of the regulatory period would be carried forward as an asset (liability) for the subsequent regulatory period at QR's cost of capital; and

  – QR's costs would be increased in accordance with the additional maintenance required from additional throughput based on the incremental maintenance charge set out in the reference tariffs.

In providing QR with this choice, the QCA has deliberately adopted the most conservative demand forecasts received from its independent advisers. This is because the QCA would prefer to provide QR with an incentive to adopt a price cap regime as it provides the greatest incentive for QR to expand output during the regulatory period. However, ultimately this is an issue for QR to decide.

QCA's Position

In assessing QR's reference tariffs the QCA has proposed that QR be given an option of a revenue cap or a price cap (based on amended demand forecasts).

16.3 Price inflator for reference tariffs

Background

The QCA proposed the Brisbane measure of the Consumer Price Index, published by the Australian Bureau of Statistics, as the price inflator. The QCA may make specific adjustments to this figure on account of possible GST impacts.

Stakeholder views

QR - the QCA's position is acceptable.

ARTC - supports QCA's proposal that the reference price escalation formula should be derived using a CPI-X framework.

QCA's analysis

In the absence of sufficient price information to construct a rail-specific price inflator for the Australian context, stakeholders including QR have agreed with the QCA that the CPI is the most appropriate inflator for use in setting the incentive mechanism. In the Draft Decision, the QCA accepted QR's proposal to adopt the Brisbane measure for the applicable CPI indicator.

At this point in time, the precise impact of the New Tax System on the domestic inflation rate is still unclear. The Australian Bureau of Statistics has decided not to publish a series based around its experimental constant tax rate measure, due to limitations with the methodology. It identified that Commonwealth Treasury estimates of the price impact of the new fiscal arrangements were more comprehensive, particularly due to the incorporation of estimates of the impact of second-round effects. However, due to unexpected factors, such as the lower Australian dollar and fluctuating energy prices, the Treasury's 'on-going' or tax-adjusted CPI forecasts, released in May 2000, could be misleading.

In light of this, the QCA takes the view that, in determining whether there is a case for adjusting the CPI, it should assess the trend in the ABS headline rate[3] over a 15 month timeframe, up to and including the September 2001 quarter, in the context of the Treasury's on-going CPI estimates.

QCA's Position

In assessing QR's reference tariffs, the QCA has adopted the Consumer Price Index, Brisbane, published by the Australian Bureau of Statistics as the inflator, adjusted by available information to account for any GST-related CPI spikes.

16.4 Derivation and calculation of the X-factor

Background

Having regard to QR's existing operational inefficiencies and the potential for future productivity gains, explicit adjustments made in modelling, the QCA proposed that the X-factor to be applied each year as part of the incentive regulatory framework will be 1.5%.

Stakeholder views

QR - is prepared to accept the price escalation factor be derived using an X-factor based on a reasonable estimate of the operating inefficiencies that exist at the commencement of the regulatory period.

The QCA's recommended value of the X-factor must be reviewed in order to take into account QR's response on the extent of operating inefficiencies that exist in the provision of below rail services in the Central Queensland coal system. In addition, this X-factor will need to be converted to an equivalent quarterly X-factor for application in the escalation formula.

FreightCorp - considers that the X-factor adopted is at the lower end of what could be reasonably justified. The X-factor could have been more encompassing. For instance, there is no allowance for:

- productivity improvements in maintenance expenditure - which the QCA estimates should decline by 1% per annum - but which the QCA proposes to take into account in the next review of QR's costs (2004); and

[3] Compiled from the weighted average of the 8 capital cities

- asset utilisation and economies of scale due to demand growth – QCA states these have been taken into account in the cash flows, but has adopted conservative demand forecasts.

FreightCorp recommends the QCA reconsider whether the X-factor sufficiently reflects the on-going levels of efficiency that should be achievable.

Stanwell - while SCL supports the use of a price cap in determining the reference tariffs, the Corporation notes that 1.5% p.a. seems relatively low in comparison with the productivity factors normally used elsewhere for public utility pricing. SCL considers that a higher figure for the X-factor in the price cap might be appropriate in the context of QR's operations.

Queensland Government – an issue which has not been raised in the context of the QCA's Draft Decision on QR's Undertaking, but which has been raised in discussion between the Government and the QCA in another context, is the calculation of the X-factor to be applied by regulators. As a regulator's treatment of this issue has potential flow-on implications to other regulated industries, the Government believes there is merit in raising this issue in a public forum.

The QCA has signalled a willingness to regulate that a significant proportion (around 50%) of any benefits arising from a monopoly infrastructure owner's taxation policies (that is, the difference between the statutory tax rate and the actual tax paid) flow directly back to end customers via a re-setting of the efficiency X-factor.

The Government is concerned with this approach for the following reasons. Firstly, it may reduce the incentive on a regulated business to minimise its taxation structures. Secondly, it will result in regulatory micro-management of the particular business. Thirdly, it will reduce the incentive for private sector entities to own or invest in regulated businesses.

For these reasons, the Government believes that the statutory rate should be applied for the calculation of the rate of return and the efficiency offset, with any taxation benefits to be retained by the owner of the regulated asset.

QCA's analysis

The QCA maintains that an annual X-factor of 1.5% is appropriate for QR. The QCA's approach has sought to identify existing operational inefficiencies and the potential for future output growth-related productivity gains in the rail sector in Queensland.

On the basis of a study which evaluated the efficiency of QR's maintenance activity, RMS found that, on average, QR's infrastructure maintenance expenditure is around 15% more expensive than it would be had it been based on competitively-determined contract rates for the activities being performed. The Authority has identified the elimination of this initial efficiency gap as a priority for the first regulatory period.

FreightCorp commented that the QCA should also incorporate expected productivity improvements in maintenance expenditure over the first regulatory period into the X-factor. The QCA acknowledges that failure to include future maintenance-related productivity gains provides QR with a marginally lower productivity target in the initial regulatory period than might otherwise be the case.

However, the QCA takes the view that the elimination of the initial efficiency gap is a sufficient target for QR to achieve in the short term. In addition, it provides QR with a less difficult transition path as it increases the likelihood of out-performance of the X-factor over time. It also highlights the QCA's conservative approach to this issue.

Stanwell considered that, compared to the productivity factors applied elsewhere for public utility pricing, QR's X-factor of 1.5% p.a. is relatively low. The QCA cautions against making inter-sectoral and even intra-sectoral comparisons. The potential for gains to be made may be unique to a particular sector or even a particular organisation. Some industries or utilities can achieve greater productivity improvements compared to others because of their relative distance to the efficient frontier and consequent greater scope to make efficiency gains.

In addition, there are a number of approaches in calculating X-factors, and direct comparisons without detailed knowledge of the precise approach being adopted, can lead to erroneous conclusions. In particular, composite X-factors that incorporate output growth, efficiency gaps and potential productivity gains will normally be greater than disaggregated X-factors, such as the one proposed by the QCA, which only incorporates future productivity growth.

The QCA agrees with QR that, to be compatible with QR's quarterly escalation formula, the X-factor will need to be converted to a quarterly equivalent. Consequently, the X-factor applied for each quarter of the regulatory period will be 0.373%.[4]

QCA's Position

In assessing QR's reference tariffs, the QCA considers that the escalation factor should be derived using a CPI-X framework, with an X-factor of 1.5% to be applied for each year of the regulatory period.

16.5 Sharing of efficiency gains

Background

In providing an incentive to outperform the X-factor, the QCA proposed QR should retain any gains from out-performance for a period of 5 years. During the first regulatory period, the QCA will further investigate measures to enable a rolling-forward approach to be adopted as part of the second period review.

Stakeholder views

QR - the QCA's intent regarding the treatment of any gains that may result from QR outperforming the efficient cost benchmark is unclear. QR had originally proposed using a 'glide path' approach, however, it is prepared to consider the adoption of a 'gains maintenance' framework. This issue should be clarified by the QCA in its Final Decision.

FreightCorp - the QCA's proposal to allow QR to retain any gains from out-performance for the term of the regulatory period and to glide path the out-performance thereafter seems to be a reasonable balance of sharing. However, as this sharing is relatively generous to QR in the event of out-performance, care should be taken to ensure that the X-factor is not set so low as to make out-performance too easy to achieve. This could allow considerable excess profitability and undermine the political credibility of the regime.

ARTC - QR should retain the benefits from out-performance of productivity improvement implied in the escalation formula (1.5%). ARTC also supports the QCA's recognition that the application of an X-factor represents only one dimension of the value created by the access provider, both for itself and its customers, which goes beyond the achievement of efficient practices in its cost structure. ARTC agrees that other gains arise through the improvement of the productivity of above-rail operations facilitated by below rail capacity enhancements. The access provider often finds it difficult to share the benefits of such improvements through a pricing adjustment and must rely on volume growth in this regard. ARTC would support the establishment of a suitable framework for addressing this issue in the regulatory environment.

In addition, in competitive markets, where prices have been negotiated, or set, at levels designed to make rail competitive and grow rail's market share (usually at a level such that revenue is below the ceiling limit), the revenue benefit of any growth in volumes should be allowed to be captured fully by the access provider, up to the ceiling limit. Given that this scenario applies to ARTC's business in its entirety, revenue cap regulation is more relevant than price cap regulation.

[4] This quarterly adjustment has been derived as follows: $(1+1.5\%)^{¼}-1$

QCA's analysis

The QCA wishes to clarify that it seeks to apply a gains maintenance approach for the retention of out-performance over the regulatory period, for a period of 5 years after the out-performance is achieved.

The QCA accepts ARTC's argument that QR should get the full benefits of volume growth on its non-coal traffics, where QR does not earn the stand-alone cost of providing the service, so long as there is no distortion in the above-rail or end-user markets.

QCA's Position

In assessing QR's reference tariffs, the QCA proposes to apply a gains maintenance approach, so that QR retains the benefit of out-performance of the X-factor for a 5-year period after it is secured.

16.6 Triggers for the review of reference tariffs

Background

QR argued that it is appropriate for its revenue limit to be adjusted to take account of events that are entirely outside of its control, thereby eliminating the possibility of windfall gains or losses. Consequently, it identified a series of events which it believed would necessitate a review of its reference tariffs.

The QCA proposed to limit the definition of a material change event to a change in taxes or a departure in actual traffic volumes of greater than 10% from the forecasts adopted by the QCA. Further, the QCA considered that any review would be undertaken in the context of all relevant departures from assumptions or forecasts that underpinned its original assessment of those reference tariffs.

Stakeholder views

Reference tariff review triggers

QR - the first trigger event discussed by the QCA is a departure in traffic volumes of +/- greater than 10% from the forecasts adopted in determining the reference tariffs. This is acceptable to QR.

The second trigger relates to a change in tax. QR accepts the QCA's recommendations that the party most able to control a risk should accept that risk. However, just as QR is not reasonably able to control the risk of a change in taxes, QR is also unable to control the risk of a change in other laws. Therefore a change in any legislation, or accepted interpretation of legislation is likely to result in windfall gains or losses for QR. QR considers this principle that QR should be compensated for the costs it reasonably incurs in the provision of access should remain consistent in the Undertaking and, therefore, apply in this instance. Consequently, all changes in laws, or interpretation of laws (including taxes) should be considered equally in the context of the material change clause.

QR considers there is significant benefit of retaining a consistent material change definition for the reference tariffs as applies in access agreements. Therefore, QR prefers the material change event definition to continue to reflect a change in laws (including tax) or a requirement of an authority. However, in recognition of the QCA's concerns regarding the uncertainty that may be created through the use of this definition, QR is prepared to specify that a material change event will only result in a change to the reference tariff, if the [cumulative effect of material change events] (since the last review of the reference tariff) would have an impact of greater than +/- 2.5% of the total reference tariff.

Application of a symmetrical test

QR – remains of the view that it is not necessary, nor consistent with the regulatory framework that is being established, for all variables to be reviewed upon the triggering of a mid-term review of the reference tariffs. This would be a very resource intensive exercise. Further, the concept of incentive regulation centres around establishing a baseline target for key variables, such as asset value and operating costs, such that the regulated entity has an incentive to over-achieve that target during the regulatory period. In this context, QR considers it inappropriate to review many of the variables used in establishing reference tariffs as part of a mid-term review of the tariffs, unless they have specifically been impacted upon by the occurrence of the material change event that is triggering the review.

If it were accepted that variables such as efficient maintenance costs and asset values are not to be considered as part of a mid-term reference tariff review (except for the impact of the material change event on those variables), the QCA's recommendation essentially means the only issues that would be considered in a mid-term review of reference tariffs would be the effect of the material change on QR's costs and the current forecast volume compared to the volume forecasts used in the determination of the reference tariffs. With regard to volume, the price cap approach recommended by the QCA is intended to result in QR accepting the volume risk on the system up to +/-10% of volume. Requiring that volume be reviewed in the event of a material change event (irrespective of whether or not this volume trigger has been reached) is inconsistent with this principle.

The reasonableness of a requirement to review all variables within a timeframe less than the nominated regulatory (Undertaking) period is, on its own, considered questionable by QR. The purpose of reference tariffs, indeed the Undertaking, is to provide certainty during the period of the Undertaking. Where there is a material change, QR is not in a position to manage the risk and, as such, should not bear the consequences of the event. However, to require the revision of a totality of departures from forecasts that underpin the original assessment of reference tariffs is considered contrary to the intent of the regulatory framework that is being established through the Undertaking.

As such, QR remains of the view that, in the event of a mid-term trigger of the reference tariffs, only the departure from forecasts underpinning the reference tariff for the variable that has caused the trigger should be considered, and these should only be considered from the date upon which the trigger occurred.

FreightCorp - the QCA proposal may be appropriate, but the relatively short period of the Undertaking (3 years) would appear to render such a review redundant. Nevertheless, it is important for any review to be both symmetric in its application and not so frequent as to result in an excessive number of reviews.

QCA's analysis

Reference tariff review triggers

QR has argued that changes in laws should be treated in an identical manner to taxes in the context of the review arrangements. It considers that, just as it cannot control the risk of a change in taxes, it is also unable to control the risk arising from changes in the legal environment. Consequently, QR believes that factors imposed by a government agency, department or court should constitute a material change event.

The QCA agrees that all changes in laws or interpretations of laws (including taxes) should be treated consistently in the context of a review trigger, where that change materially affects QR's commercial position. Consequently, the QCA proposes to widen the definition of material change event to incorporate this. However, it maintains that changes in costs induced by any other factor should not trigger reference tariff reviews during the regulatory period. These other changes in the cost of QR performing its functions would be reassessed in conjunction with future regulatory reviews.

The precise nature of the treatment of reference tariff review triggers will be dependent upon whether QR chooses to adopt a price or revenue cap.

In the event that QR adopts a price cap, both demand and supply-side factors could potentially trigger an intra-period review of reference tariffs. This would occur where:

- traffic volumes; or
- costs arising from changes in the legal environment;

vary from the QCA's forecasts by an amount greater than 10%.

If QR decides to adopt a revenue cap, any demand-side or volume changes are adjusted for through an unders-and-overs account mechanism.[5] Consequently, review triggers would be limited to instances of law-related cost departures in excess of 10% from the QCA's forecasts.

However, under either a price or revenue cap approach, the QCA accepts that the net present value of additional costs imposed by law that were not allowed for in the QCA's cash flow modelling in the current regulatory period would be taken into account in the context of the next regulatory review.

Application of a symmetrical test

QR is of the view that any mid-term review triggered should not take account of the totality of departures from the forecasts that underpinned the QCA's original assessment of reference tariffs. Rather, it should focus only on those variables specifically impacted upon by the occurrence of the material change event that is triggering the review.

The QCA disagrees with this approach. A trigger of reference tariffs foreshadowed in QR's approach would be a substantial change requiring review of all relevant departures from assumptions or forecasts that underpinned its original assessment of reference tariffs.

QCA's Position

In assessing QR's proposed reference tariffs, the QCA:

1. **has limited material change events to a change in taxes or laws or a departure in actual traffic volumes greater than 10% from the forecasts adopted in the QCA's analysis of QR's reference tariffs; and**

2. **considers any review would have to take account of the totality of departures from forecasts that underpinned the QCA's original assessment of reference tariffs.**

[5] An unders-and-overs account allows (requires) the regulated organisation to increase (decrease) its earnings in the year or years subsequent to that in which its revenues fall short of (exceed) the cap.