



Submission to the Queensland Competition Authority

Efficiency Carryover Mechanism

Response to Issues Paper

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1. Executive summary

The Energy Networks Association (ENA) welcomes the opportunity to comment on the Queensland Competition Authority *Issues Paper – Efficiency Carryover Mechanism (Issues Paper)*.

The ENA considers that the rationale for an efficiency carryover mechanism should be to reinforce the operation of truly incentive-based regulation by providing strong incentives for service providers to seek to achieve efficiency gains throughout the regulatory period. In ENA's view this is the single rationale to be considered in the design and implementation of a carryover mechanism.

A deficiency in the *Issues Paper* is its failure to adequately consider the impacts of potential regulatory error and failure in its assessment of the definition of an efficiency gain. This is particularly apparent in the discussion on the potential for the separation of 'management-induced' efficiency gains from other 'windfall' gains resulting from external factors. An accurate distinction between these types of gains is unlikely to be possible at a practical level without the introduction of a significant risk of regulatory error and failure. Other Australian regulatory authorities have not supported attempting to make such distinctions for the purposes of designing efficiency carryover mechanisms.

A second deficiency in the treatment of the definition of efficiency gains in the *Issues Paper* is its reliance on an unclear and problematic standard of competition with little apparent support in economic literature, general regulatory practice, or relevant merit and judicial appeals under third party access regimes.

The ENA considers that efficiency gains should be measured on a *cumulative* basis, especially given that a service provider which is outperforming cost benchmarks established by a regulatory authority is effectively demonstrating a level of efficiency in excess of that considered possible by the regulatory authority when setting its original benchmarks. Disadvantaging service providers who continuously outperform established cost benchmarks (even if the absolute level of out-performance is not constant) does not appear to be an approach consistent with the objective of providing a strong incentive-based regulatory regime.

A sharing ratio which results in at least an equal sharing of unanticipated efficiency gains is supported by the ENA. Energy network businesses consider that this 50/50 sharing ratio is the minimum sharing ratio that is consistent with the wording and intent of existing third party access regimes, and outcomes likely under the conditions of workable or effective competition. Similarly, the ENA believes that proposals for the inter-period carryover of assessed net efficiency losses are inconsistent with the existing provisions of energy access regimes, including the commitment to offer on a prospective basis the opportunity to recover the efficient and prudent costs of the provision of the relevant distribution services.

1.1 Background

This submission responds to the Queensland Competition Authority *Issues Paper – Efficiency Carryover Mechanism* issued in September 2004.

The Energy Networks Association is the national representative body for gas and electricity distribution network businesses. Energy network businesses deliver electricity and gas to over 12 million customer connections across Australia through approximately 800 000 kilometres of electricity lines and 75 000 kilometres of gas distribution pipelines. These distribution networks are valued at more than \$30 billion, and each year energy network businesses undertake capital investment of more than \$2.3 billion in network reinforcement, expansions and greenfield extensions.

2. Rationale for efficiency carryover mechanism

In developing a possible efficiency carryover mechanism it is important that the rationale for such a mechanism is clearly understood by all parties, and consistent with the overarching regulatory model which is proposed to apply.

The ENA considers that the rationale for an efficiency carryover mechanism should be to reinforce the operation of truly incentive-based regulation by providing strong incentives on service providers to seek to achieve efficiency gains throughout the regulatory period. That is, the mechanism should seek to address potential timing biases under original ‘CPI-x’ forms of price control, where a service provider may face incentives to defer possible efficiency gains towards the end of one regulatory period to more fully benefit from exploitable efficiencies in the next period.

In ENA’s view this is the single rationale to be considered in the design and implementation of a carryover mechanism. Broader regulatory issues, such as the overall level of access pricing, or the protection of consumers from possible price shocks, are best addressed by alternative and specifically targeted measures if this is found necessary.

3. Definition of efficiency gains

The discussion in the *Issues Paper* regarding the definition of efficiency gain fails to take into account the significant risk of regulatory error in defining and measuring efficiency gains, and also adopts an unclear standard of competition against which efficiency issues are considered. In addition, proposals to attempt to distinguish between external and management-induced efficiency gains heighten the risk of regulatory overreach, error and failure, and are unworkable in practice.

Regulatory error

In its discussion of the definition of efficiency gains the *Issues Paper* fails to acknowledge the significant issue of inevitable regulatory error, and the risks of regulatory failure resulting from these errors.

Three factors contribute to the magnitude of possible efficiency gains and losses which could arise under a carryover mechanism:

- management-induced activities or decisions (endogenous)
- external or ‘windfall’ events (exogenous)
- regulatory error in the establishment, measurement or interpretation of efficiency benchmarks

The *Issues Paper* addresses only the first two of these issues. This represents a serious deficiency in the QCA’s current analysis of carryover mechanisms. The likelihood and consequences of regulatory error and potential regulatory failure are important matters for consideration, especially in later design issues (for example, in the decision on whether to provide for negative efficiency carryovers). The ENA recommends the issue of the likelihood and consequences of regulatory error be fully addressed in any draft decisions relating to efficiency mechanisms.

Efficiency gains in effective or workably competitive markets

The QCA adopts as its basis for assessing the proposed operation of a carryover mechanism a comparison with a ‘properly functioning competitive market’.¹ The specific implications of a standard of a properly functioning competitive market are unknown to ENA at this time, as the term does not appear to be drawn from either:

- broad competition law, including the *Trade Practices Act*
- economic literature
- the National Electricity Code or the National Gas Code; or
- the QCA’s own establishment legislation

Rather than create an additional novel standard of competitive market operation the ENA considers the QCA has an obligation to base its decisions more soundly in the existing framework of general competition law, as it has evolved over the last decade.

Recent relevant judicial and merit review appeals, and independent reviews of network access regulation have provided the QCA with strong practical guidance on the standard of competition which should underpin regulatory decision-making on access pricing issues. This guidance includes the:

- Final Report of the Productivity Commission’s *Review of the National Access Regime* – September 2001
- Supreme Court of Western Australia judgment in the case *Re: Dr Ken Michael AM; Ex parte Epic Energy (WA) Nominees Pty Ltd & Anor*² on 23 August 2002.

¹ Queensland Competition Authority *Issues Paper – Efficiency Carryover Mechanism*, September 2004, p.3

² [2002] WASCA 231 [55]

- Ministerial Decision on Application for Revocation of Coverage for the Moomba-Sydney Pipeline System - November 2003
- *Application of GasNet Australia (Operations) Pty Ltd* in relation to a decision by the ACCC to draft and impose an Access Arrangement for the Victorian gas transmission system owned by GasNet Australia – December 2003
- *Application of Epic Energy South Australia Pty Ltd* in relation to a decision by the ACCC to draft and impose an Access Arrangement for the Moomba-Adelaide Pipeline System – December 2003
- Final Report of the Productivity Commission’s *Review of the Gas Access Regime* – June 2004
- *Application by East Australian Pipeline Ltd* in relation to a decision by the ACCC to draft and impose an Access Arrangement for the Moomba-Sydney Pipeline System – July 2004.

The Epic Energy WA case and the recommendations of the Productivity Commission *Review of the Gas Access* suggest that the standard of ‘workable’ or ‘effective’ competition is the most appropriate competitive standard to have regard to in applying third party access regimes to natural monopoly infrastructure.

In the Epic Energy case, for example, the WA Supreme Court expressed the view that the National Gas Code was not designed to pursue outcomes that would be the result of a ‘perfect’ competitive market. Instead, the Court detailed the elements of ‘workable competition’ and states that this is the standard which should be interpreted when considering provisions such as those contained in Section 8 of the National Gas Code. Importantly, the Court noted that a workably competitive market is a process rather than a fixed outcome.³

The Productivity Commission *Review of the Gas Access Regime* considered the implications of the Epic Energy case in some detail. The Commission also emphasised the imprecision, artificiality and subjective judgements involved in setting access prices, and shared the WA Court’s views that regulators must not seek to attempt to replicate the outcomes of theoretically perfect competitive markets. The Commission recommended that a new objects clause emphasising concepts of promoting ‘effective competition’ should be included in an amended gas access regime.⁴ For the purposes of the QCA’s development of a carryover mechanism, the concepts of ‘effective’ and ‘workable’ competition are interchangeable.

The ENA acknowledges that the QCA is not legally bound to apply the standard of workable or effective competition to its decision-making on carryover mechanisms. The ENA considers, however, that the QCA would be best placed to rely on evolving competition law developments and precedents, in preference to pursuing an approach which is uninformed by relevant development and which posits alternative competition law or economic constructs which have no basis outside of a particular

³ *Re: Dr Ken Michael AM; Ex parte Epic Energy (WA) Nominees Pty Ltd & Anor* [2002] WASCA 231 [128]

⁴ Productivity Commission *Review of the Gas Access Regime – Inquiry Report*, 11 June 2004, p.xxxiii

QCA consultation process (for example, the concept of a ‘properly functioning’ competitive market).

Treatment of windfall gains

The treatment of windfall gains under a carryover mechanism is one area in which the benchmark standard of competition adopted has substantial implications for the appropriate approach.

Implications of rejecting a perfect competition model of efficiency gains

It is generally acknowledged that the theoretical standard of perfectly competitive markets – due to its numerous and exacting assumptions – cannot be found in operation even in highly competitive market-based economies. Communities as a rule rely upon markets which may be best characterised as ‘workably’ or ‘effectively competitive’. For the provision of many goods and services society relies upon oligopolistically competitive markets or monopolistic competition.

In these ‘imperfect’ markets there is no evidence that ‘windfall’ efficiency gains are clinically distinguished or distinguishable from ‘management induced’ gains in the way suggested as plausible by the *Issues Paper*. Nor are such gains necessarily passed through instantaneously to consumers. A range of exceptions to the approach advocated by the QCA are observable in the general economy. Large sectors of the economy *do* benefit through time from ‘external events’ e.g. farming, ski resorts.

Practical issues and risks in attempting to identify windfall gains

There are significant practical difficulties and risk in seeking to identify windfall gains and isolate their impacts on the operation of an efficiency carryover mechanism.

These practical difficulties have led to the adoption of simplified approaches and assumptions by regulatory bodies charged with administering carryover mechanisms applying to Australian energy networks. The Victorian Essential Services Commission was the first Australian economic regulator to seek to apply efficiency carryover mechanisms modeled on those originally developed by UK regulatory bodies to Australian firms. It is notable that given its experience with the development and administration of carryover mechanism the ESC does not attempt the complex and uncertain exercise of separating out claimed ‘windfall gains’ in its calculation of efficiency carryovers.⁵

A cautious approach to the issue of attempting to precisely differentiate between windfall gains and net efficiency improvements is also suggested by the conclusions of the Productivity Commission in its *Review of the National Access Regime*. The Commission in this review highlighted the significant risk of regulatory error and overreach where regulatory authorities attempt to forensically forecast the precise outcomes that might arise in a theoretically perfect competitive market. The Commission noted:

⁵ See Victorian Essential Services Commission *Review of Gas Access Arrangements – Final Decision*, p.155-179 <www.esc.vic.gov.au> for the ESC’s existing approach.

...it is important that regulators are not overly ambitious in their attempts to remove monopoly rent. Contrary to the suggestions of some participants, this does not mean endorsement for unfettered monopoly behaviour by service providers. Rather, it means that access regulation must recognise the potential costs of a 'surgical' approach to rent removal and encourage regulators to focus on the more modest objective of reducing demonstrably large rents resulting from inefficient pricing or denial of access.⁶

In the present case, the QCA is not even seeking to remove monopoly rent. It is suggesting carrying out an arguably an even more complex task, that is, assessing the precise level of management induced efficiency gains on a retrospective basis, separating out from this analysis the range of external factors impacting on the overall operation of the business during the last regulatory period (external factors which will by their nature be diverse, varying in magnitude, and difficult to fully identify). An important consideration for the QCA should be that likely regulatory error in this area will itself create risks to service providers and consumers by distorting and negating efficiency incentives.

The QCA's suggestion of disallowing a fixed proportion of an efficiency carryover amount on the basis that some of it may not be management-induced would be arbitrary, and introduce disincentives for efficiency gains if set at an inappropriate level (undermining the fundamental intent of the mechanism). The ENA is unaware of any regulatory precedent for either this overarching approach, or substantive work relating to what fixed proportion would be appropriate. Due to the arbitrary and artificial assumptions which this approach would require, the ENA does not support this option.

The alternative suggested approach of requiring the firms to establish the component of cost savings that result from management decisions is not likely to significantly reduce the cost, intrusion or arbitrary outcomes flowing from attempting to differentiate between management-induced efficiencies and the impacts of external events. In effect, it places an obligation on the service provider which the regulatory body is unconvinced it has the informational resources to fulfill. While this conclusion is correct, it is a false assumption that a service provider (or any other party) will have the capacity to make this distinction with any acceptable degree of accuracy.

4. Efficiency carryover design

Measuring efficiency gains

The ENA has significant concerns relating to the QCA's approach to the most appropriate basis for measuring efficiency gains.

Selecting between the *incremental* and *cumulative* basis for measuring efficiency gains should be informed by the purpose of an efficiency carryover mechanism – to

⁶ Productivity Commission *Review of the National Access Regime – Inquiry Report*, September 2001, p.94

appropriately recognise past efficiency gains in a time-neutral manner, thereby incentivising service providers to continue to examine possible efficiency enhancing initiatives.

Adopting an approach to measuring efficiency gains which is ‘forward-looking’ is difficult to reconcile with this objective – recognition of past efficiency gains through a backward-looking assessment of how service providers have performed against predetermined expenditure targets would appear to be the superior approach.

A core concern which ENA has with the incremental approach is that it appears to measure the ‘rate of change’ of efficiency gains rather than the true total efficiency gains actually achieved. For example, in Table 1 of the *Issues Paper* a hypothetical business has actual expenditure below that forecast by the regulatory authority (that is, an efficiency gain *in excess* of gains assessed by the regulatory body as capable of being achieved in the regulatory period). There appears to be no justification for why – as occurs under the incremental approach - this hypothetical business should be effectively ‘punished’ for its Year 3 performance (where its expenditure has risen from its Year 2 performance, but nevertheless remains below the benchmark). For these reasons, the ENA considers assessing efficiency gains on a *cumulative* approach is the only methodology consistent with the intention of the QCA to apply an incentive-based pricing regime.

Sharing ratio

The ENA shares the QCA’s view that there is in a theoretical sense arguably no optimal or ideal sharing ratio in relation to carryover mechanisms. In these circumstances the ENA considers there are two principal sources of guidance which regulatory authorities ought to place reliance on. These are:

- *wording and intent of third party access regimes*

Both the National Electricity Code and the National Gas Code emphasise concepts of the need for a ‘fair’ or ‘equitable’ sharing of efficiency gains.⁷ As noted, existing forms of ‘incentive-based’ regulation *automatically* transfer uncertain but anticipated efficiency gains to users in full as they are expected to occur, and regardless of whether they occur. Given this feature, and the common meaning of concepts such as ‘fair’ and ‘equitable’, the ENA considers that a 50/50 sharing ratio is a reasonable and appropriate minimum sharing ratio for those unanticipated efficiency gains made by service providers in excess of those forecast.

- *outcomes which would be consistent with workable or effective competition*

Under a perfectly competitive market model all efficiency gains would be passed in full from businesses to end users immediately as they occurred. It is difficult to reconcile this outcome, however, with those which would be expected to occur under workable or effective competition. As this standard of competition is described and referenced in the Supreme Court judgement in the Epic Energy

⁷ National Electricity Code Clause 6.10.2 (b) (1) and National Gas Code Section 8.46

case, a wider range of outcomes would be plausible. The ENA considers that concepts of workable or effective competition would be consistent with an approach of an equal sharing of the benefits of unanticipated efficiency gains.

The QCA *Issues Paper* cites what it claims to be empirical evidence to support businesses in competitive markets retaining efficiency gains or other market advantages (such as market dominance or leadership) for only short periods. This evidence, however, appears to be of limited application as:

- a study of product innovation and entry of competing products does not provide a clear proxy for the types of productive and allocative efficiencies which the carryover mechanism appears to be principally directed towards maximising
- the concept of ‘market leadership’ is not well-defined and possibly of little relevance to the issues relating to the design of an efficiency carryover mechanism for regulated utility firms with significant community service and other government imposed obligations
- entry of a competing product, or imitation of a successful patent does not imply that from those points the original producer/innovator did not continue to benefit (i.e. receive above market returns) from their original product/innovation. A more likely and robust conclusion would be that at these points (3.4-4.0 years in the studies cited) the benefits would *begin* to diminish
- it is possible that efficiency gains in networked and/or service industries may be retained longer than commoditised or ‘product’ markets.

For these reasons the ENA believes the QCA should adopt a 50/50 sharing ratio based on efficiency gains being retained for a minimum of two five year regulatory periods.

Symmetrical treatment of gains and losses

Carryover of net *losses* between periods would violate the fundamental requirements of the National Electricity and Gas Codes that total expected revenue should be sufficient to meet the prospective efficient costs of providing distribution services.⁸

Under a negative carryover approach accumulated efficiency ‘losses’ – which may actually result from erroneous regulatory assumptions regarding potential cost savings – have the potential to threaten the ongoing financial viability of service providers. This risk should be weighed against the relatively small incentive benefits of permitting negative carryovers in a risk management context (one is a low probability event but with extremely serious consequences, whereas the risks presented to consumers from a lack of a negative carryover are smaller in quantum and perhaps unlikely to materialise). The ENA notes that in its 2000 *Electricity Distribution Pricing Review* the Victorian Essential Services Commission resolved that a negative carryover regime was inappropriate for the initial regulatory period.⁹

⁸ National Electricity Code Clause 6.10.2 and National Gas Code Section 8.1 (a)

⁹ See for a discussion of the issues which led to this decision Victorian Essential Services Commission *Electricity Distribution Pricing Review – Draft Decision*, May 2000, p.122

The proposal to allow a regulator ‘discretion’ to assess whether a negative carryover is justified promotes uncertainty and introduces unnecessary regulatory risk into decisions relating to efficiency gains (or losses). It is also likely to sponsor an intrusive *ex post* approach to regulation unjustified by potential benefits. The ENA considers that a superior approach would be to rule out negative carryovers on an *ex ante* basis due to their risks and the significant negative consequences to the community should these risks be realised.

Expenditure neutrality

The ENA considers that there is no pressing rationale for additional measures to ensure the prudence of proposed capital expenditures. This is because the risk of operating/capital expenditure substitution is adequately addressed through existing disciplines on service providers to justify proposed capital expenditure programs (and engage in efficient capital management programs on behalf of their shareholders).

In addition, there is evidence that as firms become more efficient the incentive to substitute capital for operating costs declines. Given a lack of evidence that any Queensland energy distributors are inefficient this fact would seem to reduce the need for specific and duplicative mechanisms to address this low risk.¹⁰

The Energy Networks Association
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¹⁰ Burns, P. and Riechmann, C. *Regulatory Instruments and their effects on investment behaviour*, Frontier Economics – World Bank Policy Research Paper 3292, April 2004, p.19