



**Allgas Energy Ltd**

**Submission to the Productivity  
Commission**

**Review of the  
Gas Access Regime**

---

29 August 2003



---

## TABLE OF CONTENTS

<b>1. EXECUTIVE SUMMARY .....</b>	<b>3</b>
<b>2. INTRODUCTION .....</b>	<b>6</b>
<b>3. GAS ACCESS REGIME AND ‘LIGHT-HANDED’ REGULATION.....</b>	<b>7</b>
3.1 PROBLEMS WITH CURRENT REGULATION .....	7
3.2 LIGHT-HANDED REGULATION.....	9
3.2.1 <i>Objects Clause</i> .....	9
3.2.2 <i>Approve/ Reject Model</i> .....	9
3.2.3 <i>Forms of Access Pricing</i> .....	10
3.2.4 <i>Merits Appeal Mechanism</i> .....	11
3.3 BENEFITS TO THE GAS INDUSTRY .....	11
<b>4. COVERAGE TEST.....</b>	<b>12</b>
4.1 NEED TO REDEFINE COVERAGE .....	12
4.2 MARKET POWER .....	12
4.3 COSTS OF REGULATION VERSUS BENEFITS .....	13
4.3.1 <i>Annual Regulatory Costs</i> .....	14
4.3.2 <i>Ring-fencing</i> .....	14
4.3.3 <i>Associate Contract Provisions</i> .....	15
4.3.4 <i>Impact on investment</i> .....	15
<b>ATTACHMENT 1: IMPLICATIONS OF THE EPIC CASE.....</b>	<b>17</b>
<b>ATTACHMENT 2: ASSESSMENT OF PRICE SERVICE OFFERINGS BY PROFESSOR STEPHEN C LITTLECHILD .....</b>	<b>30</b>
<b>ATTACHMENT 3: ASSESSMENT OF PRICE SERVICE OFFERINGS BY PROFESSOR DAVID K ROUND .....</b>	<b>79</b>
<b>ATTACHMENT 4: REFERENCES.....</b>	<b>80</b>

---

## 1. Executive Summary

Allgas Energy Ltd (Allgas) appreciates the opportunity to make a submission to this review of the gas access regime.

Both Allgas and its parent ENERGEX Limited (ENERGEX) regard the review as pivotal to the future of the gas industry and, indeed, to the future of the broader energy industry through its incorporation into the 'Second Phase Reforms' of energy markets being constructed by the Ministerial Council of Energy (MCE) and CoAG. This review was initiated by the MCE and will no doubt prove to be a template for a proposed new inter-governmental agreement on a national legislative framework. This framework is to have a number of objectives:

- streamline and improve quality of economic regulation;
- improve climate for investment;
- lower cost and complexity of regulation facing investors;
- enhance regulatory certainty; and
- lower barriers to competition.

Ministers have already settled on structural reforms, including the establishment of two new statutory commissions to operate from 1 July 2004. From their deliberations, it is clear that Ministers are now aiming to re-focus economic regulation away from the short term as currently applied to advancing the long-term benefits of investment and industry development.

This submission has the purpose of supporting the submission to the review by the Australian Gas Association (AGA). Allgas and ENERGEX participated in the preparation of the AGA's submission and agree with all of its recommendations. In this submission, we lend support to those recommendations by:

- drawing out the implications for economic regulation in general (and the gas access regime in particular) of the WA Supreme Court decision on the Epic Energy case;
- explaining how the proposed new form of regulation called 'price-service offerings' conforms with the principles established by the WA Supreme Court, including the emulation of 'workable competition';
- describing several other new regulatory forms which could be applied in a 'transition' from current regulation;
- emphasising the need to reduce regulatory discretion in assessing access proposals; and
- including specific examples of the issues encountered by Allgas with the current regulatory regime.

This submission includes contributions from Professors Stephen Littlechild and David Round, both leading experts in regulation and workable competition in the UK and Australia respectively.

Allgas and ENERGEX have also funded a separate submission to this review by Professor Littlechild, during his recent visit to Australia. In addition, funding has been provided to the

Network Economic Consulting Group (NECG) for an examination of the claims made by the ACCC that Australian regulators were in fact generous in their determinations compared with their counterparts in the UK and the US. The preliminary findings of this examination will be made available to this review.

What has been missing from the debate on economic regulation in Australia is recognition of the underlying battle between opposing theories of competition. We have been discussing symptoms and not causes. There has been extensive criticism of the consequences of current regulation, including from the Productivity Commission itself. For example, the Commission's *Final Report of the Review of the National Access Regime* highlighted a number of adverse outcomes, including a 'chilling' effect in investment, truncating upside returns from successful investment and reduced incentives to provide new services.

Such symptoms cannot be rectified by adaptations to the current approach applied by regulators – there must be a fundamentally different form of regulation. ENERGEX explained this need for a 'generational shift' in regulatory forms from first to second or third generation regulation in submissions both to the Commission's review of the national access regime and to the CoAG Energy Market (Parer) Panel Review. The Parer Panel noted concerns with the symptomatic effects of regulation, recognised the underlying theoretical debate and recommended the structural and process reforms in regulation that are being pursued by MCE.

The 'causal' problem has also been recognised by expert commentators such as Professors Littlechild, Beesley, Round and Johns. What these experts object to is the replication by present day regulators of the 'perfectly competitive' model of competition, where the focus is on matching costs and prices and where, by definition, there is no innovation or dynamic efficiency. It should be noted that perfect competition does not exist in the real world, although John Kay claims to have discovered something similar in the flower market in San Remo [Kay, 2003].

What the experts prefer is the emulation of the process of competition in real world (imperfect) markets, or workable competition. This is an entirely different concept of competition, where there is a discovery process for "... *the new commodity, the new technology, the new source of supply, the new type of organisation*" (Attachment 1). For example, Professor Round notes:

*"The hallmark of a workably competitive market is flexibility and independence in decision making, with no coercion, and freedom to choose on the part of both producers and consumers. This should be the implicit goal in theory of any regulatory scheme, but it is one that has in practice been subverted by a misguided application of perfect competition theory in the search for computational specificity and regulatory objectivity. What is needed is not a revenue cap based on cost of service provision, but flexible regulation that can adapt to market changes, encourage innovation, look after valid interests of consumers and producers, and above all to be relatively non-intrusive yet transparent."* (Attachment 3).

Attachment 1 of this submission describes how the Western Australian Supreme Court decision on Epic Energy has clarified the intent and meaning of concepts such as efficiency and competition under the law. In the only judicial review of energy law, the Justices determined a number of general principles to be applied to regulatory determinations. Most notably, they determined that the intent of the Hilmer reforms and the meaning of the Gas Code refer to workable competition and not perfect competition.

This supports the AGA recommendation that the new gas access regime incorporates an objects clause that specifies the adoption of workable competition and the rejection of perfect competition as regulatory models.

In any event, Allgas and ENERGEX consider that implementing new forms of regulation which can move the industry towards very light-handed or uncovered arrangements is an urgent task. This need to 'move on' is recognised by Professor Littlechild in his separate submission to this review. Noting the need to provide greater benefits to customers in terms of innovation and quality, and recognising that the scope for further reductions in costs is limited, he remarks:

*"One of the tasks ahead is to ensure that new networks and pipelines are developed whenever and wherever they are required. This means avoiding unnecessary regulation in circumstances where such regulation is counterproductive.*

*Another task is to encourage innovation and the discovery of customer preferences in the provision of services related to these networks. To secure continuing improvements for customers, the nature of regulation needs to evolve as well as the nature of the industry."*

And he suggests:

*"In Australia, ENERGEX and other companies have proposed the concept of price-service offerings, whereby customers choose among alternatives offered by the company. I have elsewhere commented on this proposal, and suggested that it deserves very serious consideration. To further this aim of discovering the needs of customers, the objectives of the gas access legislation might usefully be supplemented by some reference to stimulating innovation by network owners, and to their discovering and meeting the needs of network users."*

Attachments 2 and 3 to this submission provide commentary by Professors Littlechild and Round respectively on the relative merits of price-service offerings, one of the forms of regulation recommended in the AGA submission.

There are also other new forms of regulation that would provide even more light-handed regulation. Two of these have previously been suggested by ENERGEX to the Productivity Commission in its review of the national access regime where it was suggested that companies and industries could be regulated by:

- monitoring under the formal monitoring provisions of the Prices Surveillance Act 1983
- application of S.46 of the Trade Practices Act 1974, where no regulator would be involved beyond the provisions of that section [ENERGEX, December 2000].

This last proposal was revised in ENERGEX's submission to the (Dawson) inquiry into the Trades Practices Act [ENERGEX, June 2002]. On reflection, it was considered that S.46 in its current wording was insufficient, and a 'sister' section to S.46 was proposed that specifically aimed at preventing the abuse of market power by regulated companies. In its essence, this proposal would provide for no regulatory intervention of any sort as long as a regulated company was 'giving more or charging less' such as by lowering its prices and/or increasing its quality, range of product or service levels and so on. Such a provision could be incorporated into the gas access regime or could be provided by an undertaking to the Federal Court, a breach of which would invoke the usual consequences.



This submission also argues that in marginal cases, where the benefits of regulation do not clearly exceed the costs, there should be no price regulation. It is suggested that part of this assessment should include a coverage test that considers the competitive nature of the specific market, including the availability of substitutes.

Finally, the AGA submission recommends a strengthening of the 'approve/reject' model in the current gas code. As all regulated companies know, what in fact happens is that regulators apply a deductive rather than an inductive approach. As made clear in the Epic case, that approach is flawed. Rather than ask themselves whether a proposal is within the legitimate range of what could be reasonably allowed under the provisions of the code, regulators simply impose some other outcome they prefer. That is, they apply the 'building blocks/WACC' approach to construct a series of individual decisions which severally and mechanically produce a precise outcome that becomes the determination.

What is being proposed is the antithesis of this, and more in keeping with the original intent of the legislation and the decision in Epic. That is, there should be an overall process of assessment of the proposal and the supporting case propounded by the regulated company, in discussions with its customers, having regard to the objectives of the objects clause (to replicate the outcome of a workably competitive market). If the proposal is rejected on this basis, the company should re-submit the proposal or may appeal to a merits review. Allgas and ENERGEX's views of the essential criteria by which to judge workable competition are provided in Attachment 1.

In sum, all Australian governments have recognised that the economic regulation of utilities is important to the broader functioning of the economy. The development of good regulation is vital not simply for the gas companies themselves but also for their customers, economic growth, international competitiveness and jobs. The recommendations of the AGA submission to this review lay out the foundations for such regulation, including the circumstances where regulation need no longer apply. This satisfies the objectives of the MCE reforms listed earlier.

## **2. Introduction**

Allgas and ENERGEX consider that the current approach to regulation has served a useful purpose as a starting point and the Review of the Gas Access Regime offers the potential for a substantial step forward in regulation.

The Productivity Commission's *Final Report on the Review of the National Access Regime* highlighted a number of flaws under the current, general third party access model applied by regulators, including the "chilling" effect on investment, truncating upside returns from successful investment and reduced incentives to provide new services. The final report by the CoAG Energy Market Review Panel reinforced these concerns, noting that the ongoing debate on the form of regulation should focus on less intrusive forms of regulation.

There is a growing awareness that regulation is not simply about eliminating monopoly power and cost cutting but that a good regulatory framework will have a number of desirable attributes which will reflect those of a workably competitive market, such as providing incentives for innovation and dynamic efficiency. The decision by the Western Australian Supreme Court in August 2002 on the appeal by Epic Energy against the WA regulator supported the view that in considering economic efficiency, regulators should have regard to dynamic efficiency as well as productive and allocative efficiencies in endorsing a workably competitive model.



Allgas and ENERGEX believe that this Review is of vital importance for two reasons. First, to improve the operation of the current gas access regime and the practical application of the *National Third Party Access Code for Natural Gas Pipelines* (the Code) for those gas infrastructure providers which require regulation. Secondly, and just as importantly, to set appropriate standards for the regulation of energy infrastructure given the structural, governance and legislative reforms in the national energy market that are now being driven by the Ministerial Council on Energy (MCE). The companies suggest that it is in this context that the Productivity Commission needs to consider its final recommendations.

The Australian Gas Association (AGA) has prepared a significant submission to this review and has closely consulted with its gas members from the outset. As such, Allgas fully endorses the recommendations made within the AGA submission. In this document, Allgas would like to highlight specific issues with regard to:

- the need for moving to light-handed regulatory options within the gas regulatory regime;
- the problems and inconsistencies that have arisen through the operation of the Code by jurisdictional regulators and how these may be resolved;
- whether regulation of networks is always required and the problems with the current coverage regime; and
- the costs of regulation that have been encountered by Allgas.

### **3. Gas access regime and ‘light-handed’ regulation**

Allgas believes an assessment of the costs and benefits associated with current regulation of gas infrastructure point to the need for a light-handed regulatory approach within the regulatory gas access regime.

#### **3.1 Problems with current regulation**

When examining the current approach of regulators in applying the provisions of the Code, it is not clear that the benefits of regulation are exceeding the costs. Allgas believes that costs such as:

- compliance with regulators’ interpretations of Code requirements, which can be onerous and intrusive relative to what Allgas believes was originally intended by governments;
- inefficient concentration on the regulatory access process rather than commercial business decisions; and most importantly
- the potential chilling effect of access regulation on investment;

are significant and can be reduced by moving to a light-handed regulatory regime, while retaining the benefits of regulation.

The Productivity Commission recognised in the Review of the National Access Regime that there are deficiencies in the present national access regime and stated that, in relation to the effects of regulation on investment:

*“Access regulation can intrude significantly on property rights and give rise to a range of costs that must be set against its benefits. These include ... reduced incentives to invest in facilities to provide new essential services ... The potential ‘chilling’ effect of access regulation on investment in*

---

*essential infrastructure services is the main concern. Investment may be deterred for two reasons: potential exposure to access regulation is likely to increase the general level of risk attaching to investment in essential facilities ... investments in essential infrastructure will also be deterred if regulated returns and conditions are not expected to provide a sufficient return.” [pp xvii-xix]*

The Commission’s report identified many costs but found that abandoning access regulation at this stage would be inappropriate. It did not, however, support the current regulatory situation and considered 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.” [p94]*

Allgas agrees that the current regulatory approach is unsustainable. Allgas also believes that the recent Epic decision, specifically focusing on the application of the Code, reinforces the need for change and takes the appropriate course of action somewhat beyond that originally contemplated by the Productivity Commission for this review.

The Western Australian Supreme Court decision in regard to the Epic Energy appeal represents the first time a court has considered the issue of whether regulation has been applied appropriately and consistently within the legal intent of the Gas Code.

The court made various landmark pronouncements on the operation of the regulatory framework. In particular, the decision adds weight to the argument that the application of cost of service regulation has not adequately considered the need to provide sufficient returns to investors in regulated assets:

*“Indeed the expert evidence, including the supportive expert writings, suggested a growing awareness of the long term disadvantages of striking the balance with too great an emphasis on the interest of consumers in securing lower prices, and without due regard to the interest of the service provider in recovering both higher prices and its investment.” [cl145]*

The decision also supports the view that in considering economic efficiency, regulators should have regard to dynamic efficiency as well as productive and allocative efficiencies, supporting the workably competitive model over the perfectly competitive model:

*“In the particular context of the promotion of a competitive market for natural gas it would be surprising if what was contemplated was a theoretical concept of perfect competition, as the subject matter involves very real-life commercial situations. Workable competition seems far more obviously to be what is contemplated. This is clearly consistent with the approach of the Hilmer Report ... ” [cl124]*

The decision implies that regulators have not had sufficient regard to the interests of service providers in regulatory decisions, and that they must consider all aspects of economic efficiency in setting tariffs, replicating the outcome of a workably competitive market. This contrasts with the current approach under which prices are set to equal or track efficient costs with an incentive to keep reductions in operating costs for a short period. This approach accounts for productive and allocative efficiencies, but provides no scope for dynamic efficiencies.

The decision reinterprets the framework for regulating gas networks covered by the Gas Code and the implications of the decision are discussed in more detail in Attachment 1.

## **3.2 Light-handed regulation**

Given the findings of the Productivity Commission, the COAG Energy Market Review and the Western Australian Supreme Court, as well as the experiences of regulated entities with respect to the costs associated with the current interpretation of the Gas Code, Allgas is strongly of the view that the Gas Code needs to be revised to ensure the application of regulation is genuinely light-handed. A light-handed Gas Access Regime can be achieved by incorporating into the Gas Code:

- workable competition rather than the perfect competition model that is currently used through an objects clause;
- the requirement for regulators to either approve or reject an access arrangement only on the basis of its consistency with that objects clause;
- light-handed access pricing based on outputs rather than cost of service/ rate of return regulation; and
- a clear and independent merits appeals mechanism.

### *3.2.1 Objects Clause*

The application of the Gas Code by jurisdictional regulators has been diverse and inconsistent. This has impeded investment and imposed regulatory risk and unexpected costs on regulated networks depending on the interpretation of elements of the Gas Code by individual regulators. Allgas believes that refined Code objectives through a clear object clause may improve this situation.

A clear objects clause within the gas access regime would:

- enhance consistency of regulatory decisions and reduce regulatory error;
- ensure regulatory authorities adequately consider the interests of existing and potential gas users when making access decisions;
- give greater certainty to asset owners, access seekers and other interested parties; and
- increase regulatory accountability.

Allgas supports the objects clause submitted by the AGA to the current Review of the Gas Access Regime.

### *3.2.2 Approve/ Reject Model*

Allgas believes that tightly scripted approve/reject model is required for the operation of the gas access regime.

The current approve/reject model under the Gas Code has, in practice, not produced the outcomes expected when the gas access regime began. Indeed, the Gas Code has been interpreted by regulators as providing substantial discretion to ignore what is proposed by the regulated businesses and to make alternative “recommendations” that, if agreed, will result in approval. There is little alternative but to agree.

As such, the propose/reject model must be combined with a clear and effective objects clause and merits appeal mechanism to limit discretion and ensure regulators do not impose their own

views over those of regulated companies even where the access arrangement submitted is consistent with the objectives of the Gas Code. Ideas on the criteria by which workable competition in the objects clause may be judged are provided in Attachment 1.

Allgas suggests that proposed models by regulated business could also be assessed by the regulator against tests such as:

- providing more services and charging less;
- willingness to pay;
- benchmarks; and
- cost of service comparisons;

to ensure the broad objective of restraining persistent monopoly rents is achieved, but with no opportunities for regulatory modification and the scope to reject the proposal specifically limited to circumstances where it clearly does not comply with the objects clause.

### 3.2.3 *Forms of Access Pricing*

Allgas believes the key element of any regulated pricing regime is for regulators to focus on outputs such as price and service rather than intensive and intrusive examination of cost inputs that is inherent in today's cost of service regulatory approaches.

Regulatory pricing methods such as price monitoring or price service offerings are commonly identified as light-handed alternatives and Allgas is supportive of those methods.

Price service regulation has been designed to replicate workably effective competition. It focuses on responding to what customers want in terms of service attributes such as quality, reliability, and service levels. Prices are set according to the required service levels and networks are rewarded or penalised depending on their performance against specific targets for these services.

Price service offerings mimic what happens in workably competitive markets as:

- rewards are based on the level of performance;
- it rewards networks for innovation, market-responsiveness and the development of new services;
- it aligns supply and demand for services; and
- provides greater flexibility in response to customers' needs.

The assessment of the price service offerings concept by Professors Littlechild and Round are provided in Attachments 2 and 3 respectively.

Similarly, the key advantages of price monitoring as a light-handed alternative to cost of service regulation include:

- low levels of regulatory risk and error;
- a realignment of focus so that businesses make decisions based on commercial realities and not regulatory contracts;

- it satisfies “workable” competition; and
- it is less intrusive and inexpensive to administer.

Both approaches maintain sufficient oversight to ensure that there is no abuse of monopoly power.

#### *3.2.4 Merits Appeal Mechanism*

Access to appeal on the merits of a case is a fundamental element of any effective access regime. The appeal arrangements for the current gas access regime are not ideal in that the mechanisms are inconsistent across jurisdictions depending on the state legislation and the right to appeal is substantially limited, mainly to matters of the ‘process’ by which determinations are made.

In order for any ‘approve/reject’ regulatory framework to operate efficiently and transparently and with maximum accountability, there must be a clear and consistent appeals process. Allgas supports the Australian Competition Tribunal (ACT) as an effective body for the merits appeal process.

### **3.3 Benefits to the gas industry**

The potential advantages of a more light-handed approach in the Gas Code are that it:

- is consistent with the concept of workable competition with the focus more evenly balanced between consumers and service providers (indeed their interests are consonant);
- reduces the potential for regulatory error and significant efficiency losses through distortions in investment. As highlighted in the Commission’s Review of the National Access Regime, the regulatory error of under-compensation and its impact on dynamic efficiency is likely to far exceed the allocative efficiency cost through any overcompensation of service providers;
- focuses on commercial relationships as the regulator is no longer imposed between service providers and access seekers;
- imposes lower regulatory costs on businesses, government and ultimately, consumers including lower costs of annual regulatory compliance costs and determination of Access Arrangements for regulated businesses; and
- still maintains sufficient oversight to ensure there are no long-term monopoly rents. The regulator will be in a position to ensure compliance with the Gas Code and closely monitor regulated businesses’ performance.

Allgas believes that light-handed approaches as advocated earlier in this submission will provide competitive, open and transparent third party access to regulated networks while ensuring that potential efficiency losses due to the lack of infrastructure investment or unnecessarily high prices are minimised.

## 4. Coverage Test

As well as the need to refine the Gas Code to ensure light-handed regulation applies to all regulated networks in Australia, Allgas contends that the scope of regulatory coverage under the current gas access regime is inappropriate and needs to be reconsidered.

In marginal instances where it is not clear that the benefits of regulation significantly exceed the costs, Allgas believes that there should be no price regulation. Instead, all that is required is regulatory oversight, information disclosure or the threat of re-coverage. This would allow competition to develop in those gas infrastructure markets.

For example, gas distribution networks operate in a variety of market contexts across Australia, which makes the adoption of a single regulatory approach costly and unwarranted. The markets differ in:

- level of competition from other fuels;
- the scale of network, which impacts on the cost effectiveness of access pricing regulation; and
- the utilisation of the networks.

Given this, it is important for access regimes to have coverage provisions which apply access regulation that is appropriate in the circumstances. Allgas believes that possible options for the Productivity Commission to explore include:

- a coverage test that considers the competitive nature of the energy industry and of specific markets; or
- only applying information disclosure or minimum Gas Code requirements on infrastructure where the need for regulation is marginal or cannot be demonstrated to be significant.

### 4.1 *Need to redefine coverage*

Access price regulation, and by that Allgas means light-handed regulation as defined earlier in this paper, should only be applied to gas distribution networks where:

- substantial market power exists because there is inadequate competition from other energy providers;
- there is evidence of a significant risk of the abuse of monopoly power; and
- the benefits of coverage outweigh the direct and indirect costs of regulation.

### 4.2 *Market power*

Gas distribution networks face considerable competition for industrial, commercial and residential customers from energy sources such as electricity, LPG, solar power and oils.

In Queensland, the gas industry is dominated by the industrial sector which consumes almost 90 per cent of final gas demand while the residential sector has less than a 5 per cent share. Large industrial customers constitute almost 85 per cent of the gas demand in Queensland, and their gas is purchased directly from producers, not through the gas distribution utilities. In reality,



only 15 per cent of gas consumption in Queensland is delivered through a distribution network. Furthermore, large industrial users consume almost three-quarters of the gas that is actually distributed. These large gas users also have significant countervailing power.

The commercial sector in Queensland utilises natural gas for cooking, hot water, steam raising and heating but competition between gas, electricity, butane and LPG is a major determinant of market share.

Similarly, residential gas usage in Australia is popular in southern states as southern residential consumers use gas for cooking, hot water service and especially space heating. In Queensland, usage is restricted to cooking and hot water with very limited space heating. As such, average domestic usage in Queensland is only 14 GJ per annum compared with over 60 GJ per annum in Victoria. Significantly, the infrastructure cost for distributing the gas to residential customers remains virtually the same.

As a result, the unit cost of gas distribution is significantly higher in Queensland and any investment in distribution networks requires large contracted industrial or commercial loads or very high penetration of domestic customers before they are instigated. The higher cost of distribution has meant that competition between gas, LPG and electricity for residential loads is extremely keen and a significant constraint on pricing behaviour.

Furthermore, given the low usage and penetration of residential customers, the economic viability of natural gas distribution networks in Queensland is primarily driven by a small number of well-informed large industrial or commercial customers with significant countervailing market power. This acts as a further constraint on the exercise of any potential monopoly power by a distributor.

All network service providers have a commercial interest in maximising throughput to reduce unit cost. Low customer consumption levels, such as in Queensland, accentuate this issue. Therefore, the commercial reality is that market power rarely exists in gas distribution networks.

Future coverage arrangements for the gas access regime should recognise the importance of inter-fuel competition, countervailing power and the commercial priorities of service providers in constraining monopoly behaviour. In particular, if such matters are considered alongside the true costs of regulation as identified earlier in this paper, it is difficult to see the benefit of regulating many of the gas networks in Australia, as simple reliance on market outcomes is likely to lead to greater economic efficiency than the application of access regulation.

Providing minimum Gas Code requirements such as basic information disclosure for smaller gas networks or infrastructure that face high levels of competition from existing fuels may be a viable alternative. However, Allgas reiterates that even gas networks operating in a more 'mature' market context require light-handed regulation within the Gas Code if the necessary investment in infrastructure and competition is to develop.

### **4.3 *Costs of regulation versus benefits***

All types of regulation have significant direct and indirect costs which may include:

- reduced incentives to invest in infrastructure assets;
- administrative costs for government and compliance costs for businesses; and



- inefficient investment in related markets.

These costs are increased by the inevitability of regulatory error and there is a need to consider these costs carefully and to recognise that there are some areas where price regulation of the type contained in the existing Gas Code is unnecessary.

Almost all costs are passed on to end-users, especially given the common approach at this time of the regulator imposing fees to cover their costs of operation. Allgas believes that these costs have significantly reduced the efficiency gains that could have arisen from the gas access regime.

As indicated above, the residential and commercial gas market in Queensland is very small and any additional costs have a significant impact on the competitiveness of gas against other fuels. The fixed nature of regulatory compliance costs, irrespective of the size of the business or the market involved, has exacerbated this issue.

#### 4.3.1 *Annual Regulatory Costs*

Allgas understands that the Gas Code was written to encourage 'light-handed' regulation of the gas industry. However, in Allgas' experience, this has not been the case.

Most regulators apply both the Gas Code and the National Electricity Code (NEC) to regulate gas and electricity distribution entities within their jurisdiction. Not surprisingly, regulators have attempted to match the gas and electricity obligations within their jurisdiction by imposing obligations on gas entities that parallel the requirements of the NEC.

This has increased the annual regulatory compliance costs of the Allgas gas distribution network to similar levels to that of ENERGEX Limited, which operates an electricity distribution network with regulated revenue at least fifteen times that of the Allgas network.

Some examples of the increased compliance costs created by the interpretation of the Gas Code follow.

#### 4.3.2 *Ring-fencing*

The industry generally believes that the ring-fencing provisions of the Gas Code are clear, workable, and do not result in intrusive and heavy handed approaches to either information provision or access pricing regulation.

Unfortunately, Allgas' experience has been in contrast with the industry view as the interpretation of the Gas Code by the Queensland regulator has significantly increased the reporting requirements and costs of compliance for ring-fencing arrangements.

For example, the treatment of ring-fencing compliance reporting has required Allgas to:

- submit a report demonstrating that the ring-fencing requirements of the Gas Code have been met. To demonstrate that no breaches have occurred (that is, to prove our innocence), Allgas is required to provide all procedures, measure the effectiveness of such procedures, document how they are assessed and obtain independent review of the procedures. The annual ring-fencing compliance report numbers hundreds of pages while other jurisdictions simply require a signed affirmation that ring-fencing is effective; and



- report under General Accounting Guidelines for Gas Distribution Networks. These are the first guidelines to have been published by a regulator and require extensive accounting templates to be completed, including working papers for each specific cost allocation, as well as a Cost Allocation Manual to be submitted and approved by the regulator. There is also an audit undertaken of the Regulated Accounts by an independent auditor. Clearly, the provisions in Part 4 of the Gas Code need to be clarified to ensure that they are not onerous in their application.

#### 4.3.3 Associate Contract Provisions

The Associate Contract provisions in the Gas Code were designed to ensure that service providers did not substantially lessen competition in markets by entering into anti-competitive arrangements which would adversely impact on downstream participants and competition generally.

Many Associate Contracts have been submitted and approved by regulatory authorities. However, Allgas has recently sought to put in place an asset management agreement between itself and an associated company, ENERGEX Limited.

In this instance, the Associate Contract provisions have been shown to be ambiguous with the jurisdictional regulator interpreting the definition of an Associate Contract to include all contracts with associates that have any connection to the provision of a service. As such, they have sought access to the proposed asset management agreement for their approval process.

The commonly held interpretation and intent of the Gas Code is for an Associate Contract to relate to agreements that impact on downstream retail markets (ie Use of System agreements). Allgas believes the regulatory interpretation of the provisions imposes regulatory control over commercial matters that should be the province of the service provider.

Allgas believes the current Associate Contract provisions of the Gas Code should be clarified regarding what constitutes an associate contract.

#### 4.3.4 Impact on investment

Further investment in the limited gas distribution networks in Queensland is critical to ensuring that:

- new customers or areas can be provided with access to natural gas;
- the current gas network assets are utilised more efficiently, reducing costs to all consumers;
- the overall gas distribution network continues to operate reliably; and
- natural gas can compete with other fuel sources.

Allgas is currently pursuing the incremental expansion of the distribution network to increase customer penetration and gas consumption, and limited capital investment to provide enhanced services. This investment is being progressed despite the regulatory risks that are inherent in the gas access regime. These risks are further exacerbated by:

- the requirement for gas distribution infrastructure to be in place in order to stimulate gas consumption;
- the small size of the Queensland gas network; and



- 
- the intense competition from other fuels given the relative cost of natural gas in this market.

As noted earlier, Allgas and ENERGEX consider that this issue is being addressed with the international comparisons of rates of return currently being conducted by the NECG. Those data will be supplied separately to the Commission.

## Attachment 1: Implications of the EPIC case

On 23 August 2002, the Western Australian Supreme Court handed down its decision in the case of *Re Dr Ken Michael AM; Ex Parte Epic Energy (WA) Nominees Pty Ltd and Anor* [2002] WASCA 231. The Epic decision dealt with a dispute about regulation of the Dampier to Bunbury Natural Gas Pipeline (DBNGP), which supplies natural gas from north west WA gas fields to Perth and surrounding areas. The DBNGP is regulated under the Gas Code by the Independent Gas Pipelines Access Regulator in Western Australia (Dr Ken Michael).

The Western Australian Government sold the DBNGP to Epic Energy in March 1998 for

\$2.407 billion under a competitive tender arrangement. For the purpose of determining tariffs for the pipeline, the regulator subsequently estimated the capital value of the DBNGP. Based on a valuation of the pipeline between depreciated actual cost and depreciated optimal replacement cost, the regulator arrived at a value of \$1.234 billion. On the basis of this valuation and other factors, its draft determination was that tariffs should be \$0.74/GJ for transport of gas from Dampier to Kwinana south of Perth and \$0.85/GJ for delivery points south of Kwinana. Epic had been expecting tariffs of \$1/GJ, and challenged the Draft Determination.

As noted in the summary, the case focussed on questions of law and how the Gas Code should be construed and applied. In the Epic case itself, the Court concluded that the Regulator had committed fundamental errors of law in its Draft Determination in a number of respects. It made clear that there should be a reconsideration and a correction of the errors of law found.

The Court's decision establishes some general principles of regulatory approach; specific principles relevant to applying the provisions of the Gas Code; and clarification of a range of technical points, both legal and economic.

The important general principles of regulatory approach include [AGA 2002]:

- regulatory decisions on third party access prices should take into account a number of policy principles established in Section 2.24 of the National Gas Code;
- in the determination of third party access prices, the regulator should consider a wider range of political and social considerations, not just economic theory;
- regulators must fully take into account the effect of their decisions on past investment made prior to the introduction of the National Gas Code to ensure that sound commercial investment decisions made in the past are not rendered loss-making because of regulatory determinations;
- the National Gas Code is not aimed at replicating the outcomes of a theoretically 'perfect' market, which is an abstraction. It is designed to promote outcomes similar to those that might occur in a 'workably' competitive market (which may sometimes include elements of persistent market power);
- the recovery by a regulated business of the actual price paid for an asset including a return on investment is a legitimate business interest, and for a range of social, political and public interest considerations it may be appropriate to consider asset purchase prices in establishing initial regulatory capital bases;
- there is no provision of the National Gas Code that supports the views of regulators that future revenues available to the regulated business must be no more than the efficient cost

of delivering the service. There may be public policy grounds in either not distorting investment, or in protecting the legitimate business interests of regulated businesses, to allow the recovery of more than 'efficient' costs; and

- the National Gas Code deliberately adopts two different standards of treating investment, one directed to investments made prior to the introduction of regulation, the other to investment made under the current regulatory framework.

This attachment focuses on the implications these general principles have for the economic regulation of energy utilities. Regulators are bound by the law and should be guided by the interpretation of the law by the Courts.

There will be implications for all sorts of cases under the Gas Code. For instance, it will apply to all current and future assessments of access arrangements for covered gas pipelines and distribution networks. It may be relevant to historical decisions on these matters and possible claims for compensation, particularly where pipelines or networks were purchased prior to the Code at a cost based on the expectations of higher returns than regulators have allowed. It will also have consequences for the certification of regimes as 'effective' under Part IIIA of the Trade Practices Act 1974. As Minter Ellison note ("Epic Decision Re-Writes the Rule Book for Gas Access Regulation, October 2002"):

*"The Court's reasoning in this regard shows that the correct interpretation of the Code is vastly different from the narrow, theoretical approach which has been adopted by regulators to date," and*

*"... will require all regulators to significantly review their policy approach to concepts such as 'efficient costs' and 'competitive markets', and take much more seriously the legitimate business interests of service providers."*

## **NEOCLASSICAL APPROACH IS INCORRECT UNDER THE LAW**

In determining revenue or price caps and reference tariffs in electricity and gas, all Australian regulators have applied a cost of service or 'building blocks' approach, which uses a weighted average cost of capital (WACC) model. In essence, the caps are set at or about the estimated costs of efficient companies, including an allowance for return on capital employed. This replicates perfectly competitive markets where prices will equal costs at equilibrium. No firm will have any market power to raise its price above the level charged by other firms or above the level of costs. As Professor Littlechild notes [2001, p4], the approach of the matching prices and costs applied by regulators derives from the static neoclassical concept of perfect competition and is a "hypothetical end-point of the competitive process".

As noted, all Australian regulators - the ACCC and jurisdictional agencies - apply the same approach. All of those regulators are members of the Utility Regulators' Forum which meets regularly to ensure consistency.

In its Draft Determination, the Western Australian Regulator followed the normal practice of regulators and imposed a 'pure theoretical' cost of service approach based on a WACC calculation in determining allowable revenue and tariffs. As with normal practice, the Regulator adopted theoretical forward looking considerations to replicate lowest cost outcomes which was believed to be the correct interpretation and application of Section 8 of the Gas Code.

However, in a detailed piece of analysis, the WASC has found that the objective of the Hilmer Report and the Competition Principles Agreement under National Competition Policy is for regulation to replicate the outcomes of a workably competitive market and not a perfectly competitive market. For example:

*“In the particular context of the promotion of a competitive market for natural gas it would be surprising if what was contemplated was a theoretical concept of perfect competition, as the subject matter involves very real-life commercial situations. Workable competition seems far more obviously to be what is contemplated. This is clearly consistent with the approach of the Hilmer Report and is the notion of competition that was explored in the Queensland Co-operative Milling Association Ltd case quoted above.” [WASC, p58]*

*“It is my conclusion that in the preamble to the Act and the introduction to the Code the concept of a “competitive market” is that which economists in this field would understand to be a workably competitive market.” [WASC, p59]*

*“that as a competitive market, in this sense of an economist’s understanding of a workably competitive market, is not a fixed and immutable condition with any absolute or precise qualities, but a process which involves rivalrous market behaviour: Re Queensland Co-operative Milling Association Ltd.” [WASC, p60]*

The WASC’s findings will come as no surprise to Australian regulators. There has been considerable debate over the form of regulation and the meaning and intent of the regulatory framework leading up to the Epic decision. Energy companies have informed regulators in public submissions and discussions in much the same vein as the WASC Justices as least back to 1998, including a briefing of all regulators at a meeting with the Utility Regulators’ Forum in that year. Indeed, similar points were raised in several gas determinations at an earlier time.

In Victoria, the case that the neoclassical (building blocks) approach fails to satisfy the legislative framework, including the National Electricity Code, was put to the then Office of the Regulator-General (ORG) a number of times by the energy companies and others. For example, United Energy made identical arguments in its submission to the ORG’s Consultation Paper No. 1 [Oct 1998] in the 2001 Electricity Distribution Price Review, including quoting some of the same references to the Hilmer Report later used by the Justices in the Epic case. These analyses, arguments and references were further developed in United Energy’s submissions to the ORG’s Consultation Papers No. 2 [Feb 1999], No. 3 [March 1999], No. 4 [June 1999], No. 5 [Feb 2000], and in response to the ORG’s draft decision [July 2000].

It is worth noting some of the arguments put as these led to United Energy formulating price-service offerings as a new approach to regulation to emulate the workable competition model.

To take some instances, in response to CP No. 2, United Energy [1999] submitted:

*“What needs to be appreciated by the general reader with respect to that question is that Australia’s legislation and policies with respect to reform and regulation (including the recommendations of the Hilmer Report and the consequent National Competition Policy legislation, the Trade Practices Act and patent laws) rest on the foundation of the classical theories to be found in industrial organisation economics and related areas, including the theories of contestability, workable or effective competition in (imperfectly) competitive real world markets, and of market failure. By contrast, it appears that the proposals in CP1 and CP2 depend on the neoclassical model of perfect competition, (witness the argument for prices to equal costs in the short run and references to fruit and vegetable markets, for example).*

*While this debate may seem arcane to the general reader, it needs to be appreciated that the model of perfect competition is stylised, with many simplifying assumptions that rarely if ever exist in real markets, even in fruit and vegetables. It is useful for teaching and hypothesis testing but was never intended for policy formulation or any actual application.” [p15]*

In response to CP No. 4, United Energy [1999] submitted that it had:

*“argued long and hard in earlier submissions that, from first principles, the ORG is simply applying the wrong sort of model. It is applying a corporate finance version of perfect competition of neoclassical economics in which, by definition there is no innovation or dynamic efficiency. As we have argued previously, this model may be useful for teaching or hypothesis testing but was never intended for any sort of actual application to real world markets.*

All the most eminent economists and regulators acknowledge that regulatory bodies should be attempting to emulate effective or workable competition in imperfectly competitive (Schumpeterian) markets.

Professors Stephen Littlechild and Michael Beesley are the founders of incentive regulation. As Beesley notes:

*“The competition which is being ‘mimicked’ is not neoclassical competition but Schumpeterian. The regulator is playing both the role of creating the possibility of earning innovatory gains and that of the ‘perennial gale’ of competition which tends to blow them away over time.”. [Beesley, 1996, p213]*

Professor Littlechild re-affirmed the need for such a model on his recent visit to Melbourne and Professor Johns argues the case for the Schumpeterian model in his submission to the ORG (Johns, 1999, p1). What is so disappointing is that none of this advice has been taken up by the ORG.”

Similarly, in response to Consultation Paper No. 5 [Feb 2000], United Energy notes:

*“More generally, United Energy considers that Consultation Papers No’s. 3 and 5 are also incorrect in arguing that economic efficiency requires that revenues must track costs. To enforce such a criterion would result in the opposite position to that which economic theory dictates and government policy requires, and would be inconsistent with the first criterion. It may also be open to challenge under the Tariff Order.*

*By definition, a matching of prices/revenues and costs would kill off any prospect for innovation. IPART, the NSW regulator recognises that these must be ‘unlinked’ if incentives are to be provided to create the dynamic efficiency required by policy makers, and The Victorian Department of Treasury and Finance notes that a ‘mismatch’ is a basic feature of incentive regulation ‘...of which there can be no doubt.’*

*It is also incorrect to argue that tracking is necessary to eliminate any sustained profits or losses. As The Treasury points out (p6), such profits should be viewed as the ‘cost’ of lower prices to consumers from effective incentive regulation, and therefore within the government’s electricity regulatory framework. This is in contradiction of CP5 which claims that “ ... Sustained profits would not be consistent with promoting the interests of end consumers” (p3). In effect CP5 is assuming that consumers are irrational, preferring higher prices as long as firms earned no sustained profits.*

---

*However, there would be no sustained or 'excess' profits under the regulatory forms proposed by United Energy and others in earlier submissions." [p7]*

Moreover, in response to the ORG's Draft Decision, United Energy points out [July 2000]:

*"In addition to the problem of the Draft Decision meeting the Office's own criteria on customer preferences, it also appears to contravene the Office's legal requirements under the regulatory framework. Two particular matters stand out – the Tariff Order and the National Electricity Code, which are dealt with here." [p13]*

Other energy companies also made submissions on the legal framework. On 17 August 2000, all five companies made a joint submission on these matters in 'Joint Submission By The Five Victorian Electricity Distribution Businesses To The Office of the Regulator-General'.

The story in New South Wales is similar. For example, United Energy, in its 1998 submission to the Independent Pricing and Regulatory Tribunal (IPART) on its Draft Decision on Access Arrangements for Great Southern Energy Gas Networks raised key areas of concern:

*"The access regime that is proposed is unlikely to satisfy the objectives of national micro-economic reform policy and the relevant legislation, to the potential detriment of the long term interests of users and consumers.*

*The relative merits of alternative regimes that offer the prospect of achieving those objectives have not been adequately explored and assessed.*

*The draft decision is, in effect, establishing a heavy handed, cost of service, rate of return regime which has the potential to increase regulatory risk and stifle competition and investment, with rates unlikely to produce sufficient revenue for incremental and innovative investments which would pass the prudent capital budgeting criteria of commercial boards." [p3]*

And noted that:

*"Reform policy rests on the foundation of the principles to be found in the theories of contestability and workable or effective competition in imperfectly competitive real world markets. It is not, as some regulators appear to believe, attempting to replicate the theoretical outcomes of the model of perfect competition.*

*Moreover, reform policy is about maximising consumer and producer surpluses, or creating the largest possible 'cake' that can be fairly divided. This aligns consumer and business interests in the long term. Reform policy is not about, as some representatives of consumer groups appear to believe, maximising the short-term benefits to consumers. That would not be in their long-term interests. Long-term interests include those derived from the encouragement of growth, innovation and diversity of choice. Finally, the role of the regulator under reform policy is seen as light handed and facilitating competitive processes, but not determining market structures, investment levels, technological choices and consumer preferences." [p3-4]*

In a submission to IPART in response to a discussion paper on regulation, United Energy [March 1999] also noted, referring to the previous paragraph above:

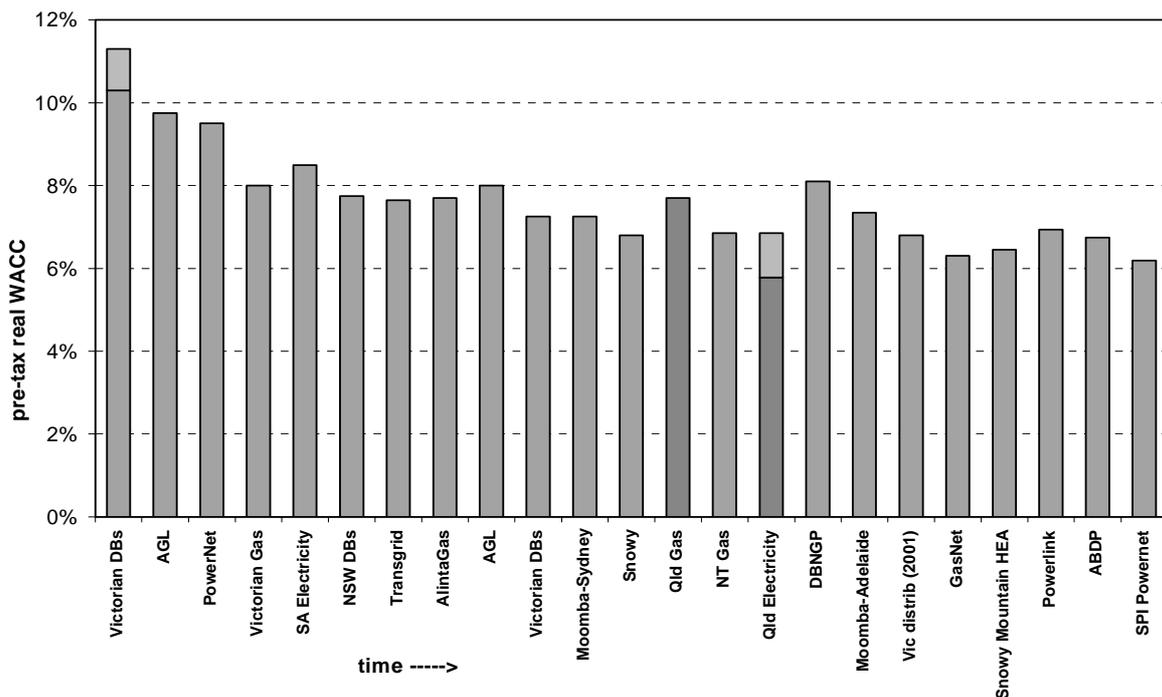
*"Of course, if a regulator has in mind an entirely different model of competition to that which economic theory dictates and government policy requires, the debate on matters that arise from that difference will be confused. That confusion is made worse by different views*

*(apparently also between regulators) on what economic efficiency means and what it implies for inducing appropriate behaviour by firms. The bottom line here is that the model of perfect competition combined with micro management will not maximise economic efficiency in any of its elements and could make matters worse than if there were to be no regulation and monopoly prices were to rule. By contrast, while no regulation is perfect, only true incentive regulation (coupled with information on consumer preferences) offers the prospect of satisfying the dual objectives of preventing any abuse of market power and promoting long term efficiency.” [p6]*

Other energy companies have made similar submissions, not only to various jurisdictional reviews but also to those of a national character. For its part ENERGEX has argued the inappropriateness of the neoclassical approach to the Productivity Commission’s review of the national access regime (submissions in December 2000 and June 2001); the Council of Australian Governments Review of Australian Energy Markets (April 2002); and the Committee of Inquiry into the Trade Practices Act (Dawson review) (June 2002).

Nonetheless, regulators have continued to apply the neoclassical approach with ever-lower WACC returns to regulated energy companies as shows.

**Figure 1: Weighted average cost of capital (WACC) table**



Source: KPMG 2000, ESC, ACCC

The horizontal bar in Figure 1 represents the sorts of returns that utilities should have been awarded under the neoclassical approach adopted by regulators according to KPMG. As will be argued, replicating the outcomes of the workably effective model would, for utilities that are performing well, imply rates at least at the KPMG levels.

What is increasingly clear is that a continuation of the neoclassical approach in gas or electricity could well result in increased acrimony and litigation. On 6 September 2002, the AGA submitted to the Essential Services Commission an analysis of the consequences of Epic and the ESC’s

Draft Decision in approving access arrangements for the Victorian gas networks. It noted that the Draft Decision:

*“ ... may be fundamentally inconsistent with both key general principles established in the judgement on the Epic Energy case and specific findings on the application of the National Gas Code. These include a number of potential errors of law.” [AGA, p2]*

On 13 September 2002, the AGA submitted a similar analysis to the ACCC regarding its Draft Decision on GasNet Australia. From the ACCC’s website, we also note a letter from KPMG pointing out alleged errors of law in the wake of Epic in the access arrangement for the Moomba to Sydney Pipeline System. The President of the Australian Pipeline Industry Association, Mr Jim McDonald, has made statements on this matter (AFR, 29 October 2002, AFR f2 networks, 31 October 2002), including “This industry is engaged in serious litigation to protect our property rights, and that litigation threatens to escalate”.

## **SECOND IMPLICATION: WORKABLE OR EFFECTIVE COMPETITION MODEL IS CORRECT UNDER THE LAW**

The WASC has determined that regulation under the National Gas Code should replicate a workably effective competitive market. This appears a number of times in the judgement, for example: “Section 8.1(b) provides that a reference tariff should be designed with a view to replicating the outcome of a competitive market, ie as indicated earlier, a workably competitive market” [WASC, p65].

The concept of workable or effective competition is central to Competition Theory which underpins antitrust legislation in a number of countries. In Australia, it underpins the Trade Practices Act 1974 which is derived from US legislation.

The concept was developed in the 1940s, largely in response to widespread misgivings about the technical validity and poor foundation for policy of neoclassical economics, which had emerged and swept all before it in the 1920s. As JM Clark observed, perfect competition “does not and cannot exist and has presumably never existed” and affords no reliable standard for judging real-world conditions. Both Clark and Schumpeter stressed the dynamic nature of competition. As Schumpeter observed, the kind of competition which is decisive arises from “the new commodity, the new technology, the new source of supply, the new type of organisation”. In its essence, it was simply a return to the classical economic concept of competition as a dynamic process in which entrepreneurs sought to better their rivals by creating products and services which would most satisfy consumer needs – a concept which can be traced back to Adam Smith.

The concept of workable or effective competition is a totally different animal to neoclassical, or general equilibrium, economics based on the static perfect competition model, with its focus on ensuring that prices must track or match efficient costs so that the allocation of resources (as defined by neoclassical assumptions) is maximised.

The basic tenets of neoclassical economics were finally demolished at the technical level in the ‘Cambridge Controversies’ of the 1960s. Nonetheless, neoclassical economics is, as United Energy remarks on page 5, a useful teaching device and has continued to dominate undergraduate economics in Australia and abroad. As Littlechild [2001] notes, “Standard economics textbooks, as developed during the middle to latter part of the twentieth century,

reflect the so-called neoclassical perspective. This centres on the concept of perfect competition as a benchmark.”

As noted, the inappropriateness of the neoclassical model of competition for antitrust (and other economic policies) was recognised in the 1940s. As Pickering [1974] points out, perfect competition is neither perfect nor competitive, and the pursuit of perfect competition and the Paratian optimum does not offer any useful guide to competition policy. In its submission to the current Dawson Review of the Trade Practices Act 1974, International Chamber of Commerce notes that at least three recent Nobel Prize-Winning economists have made the same points – Friedman, Stigler and Hayek.

And as noted in the previous section, energy companies have informed regulators that the neoclassical model is also inappropriate for the regulation of utilities at least back to 1998. These arguments were reinforced by Littlechild in his 2001 paper.

What then is workable or effective competition? Starting from Clark, who coined the phrase, “the theory of effective competition is dynamic theory”. From a considerable literature that soon developed in the matter, Scherer [1971] summarised seven essential performance criteria of firms:

- Output levels and the range of qualities should be responsive to consumer demands.
- Success should accrue to sellers who best serve consumer wants.
- Opportunities for introducing technically superior new products and processes should be exploited.
- Promotional expenses should not be excessive.
- Firms’ production operations should be efficient.
- Profits should be at levels just sufficient to reward investment, efficiency and innovation.
- Prices should not intensify cyclical stability.

The Justices in WASC use both words ‘workable’ and ‘effective’. Bain [1968] interprets workable as reasonably satisfactory competition, as revealed by a reasonably satisfactory performance that enhances economic welfare to a reasonable degree. He distinguishes this from ideal performance which he interprets as adaptations of enterprises to their markets to a maximum degree (this should also be distinguished from the ‘theoretical ideal’ of neoclassical general equilibrium, which as argued, is far from any sort of ideal in the real world). Clark interprets workable to mean feasible, and distinguished this from effective, which he considered emphasised progress.

As remarked by the Justices in WASC, workable or effective competition deals with the process of competition. The Justices were at pains not to preclude developments in competition theory. Over the last 20 years or so, competition theory has developed along the lines of the Dynamic Model referred to by Littlechild [2001]. Attachment 2 provides an update and expansion on the model by Professor Littlechild. Different writers have somewhat different emphases within this model but all are concerned with replicating the process of competition in imperfect markets. Those differences between writers may have material implications for policy when applied to trade practices issues, such as merger provisions, but these appear to mean very little when the model is applied to the economic regulation of utilities.

About the only significant difference is in the length of time that rents should persist for in justifiable reward for innovation, developing new products and so on. Whereas one view is that such rewards should be progressively glided away, emulating the Schumpeterian “gales of creative destruction”, another view is that there is no necessary length of time. Innovative firms may stay ahead of the pack for very considerable periods [eg see ICC, 2002].

Unlike the precision of the neoclassical approach, where allowable rates of return are calculated by regulators to several decimal places, workable or effective competition is imprecise, even ambiguous. It will require judgement by regulators in their determinations about what is feasible and reasonable and whether consumer preferences are being satisfied. Nonetheless, it is a hard taskmaster. Rather than focusing on prices and costs, the focus will be on non-price behaviour and beating ever harder targets in service delivery, as occurs in a workably competitive market. Regulated firms will have to discover what their customers want and are prepared to pay for, and the most effective means of delivering those products and services. For many monopolists, this may mean a fundamental change in internal culture and strategies. And while the opportunity for significantly greater profits will be created, so will the danger of lower profits or losses for underperformers.

## THE WAY FORWARD

The Justices in the WASC have determined that the Gas Code requires the application of economic methods and theory to “replicate the outcome of a workably competitive market” [p59] and provide guidance on how regulation should be applied by providing analysis and clarification of precedents, concepts, words and phases throughout the findings.

This section seeks to summarise these analyses and conclusions. In so doing, we also recognise that the Justices considered it important to ensure that new developments in the theory of workable competition, or dynamic competition theory should be incorporated.

### *Focus on customers*

The Justices were of the view that the law requires that regulation should aim to satisfy the revealed preferences of consumers by utilising the rewards and penalties inherent in workably competitive markets. For example, they quote from the Trade Practices Tribunal decision on QCMA [1976]:

*“Thus we think of competition as a mechanism for discovery of market information and for enforcement of business decisions in the light of this information. It is a mechanism, first, for firms discovering the kinds of goods and services the community wants and the manner in which these may be supplied in the cheapest possible way. Prices and profits are the signals which register the play of these forces of demand and supply. At the same time, competition is a mechanism of enforcement: firms disregard these signals at their peril.” [WASC, p56]*

This is precisely what the new dynamic model of competition theory is about:

*“The economic problem is not simply to allocate resources efficiently, given this (sic) assumed data. On the contrary, the economic problem is, as well, to discover this (sic) data. What products do customers want, what are the most efficient ways of producing these, and what will be the level of demand for each product? What new and better products and means of production can be discovered? Market participants have to make judgements about all these matters. They are entrepreneurs, trying to discover opportunities for meeting customers’*

requirements more efficiently than other firms. They may turn out to be right, in which case they make profits, or they may turn out to be wrong, in which case they make losses.

Over time, market participants tend to learn from their successes and mistakes, and from those of others. In consequence, over time there is a tendency for those goods and services to be discovered and produced that consumers most want, and produced in the most efficient way. But this is only a tendency, not a description of the actual state of affairs at any one time. This is partly because, at any time, markets will typically not yet have discovered what these 'best' products and technologies are. It is also because the "best" products and technologies are constantly changing, as producers innovate and seek to do better." [Littlechild, 2001, p61]

#### *Promote innovation and superior new products and processes*

The WASC decision stresses the need for dynamic change and innovation and recognises the need for higher prices and profits above the perfectly competitive or 'normal' rate to induce such effects. For example, quoting the Hilmer Report [p253]:

*"Decisions in this area also need to take account of the impact of prices on incentives to produce and maintain facilities and the important signalling effect of higher returns on encouraging technical innovation. For example, relatively low access prices might contribute to an efficient allocation of resources in the short term, but in the longer term the reduced profit incentive might impede technical innovation."* [WASC, p44]

The Hilmer Report is replete with references about the need for the promotion of long-term dynamic change through fostering innovation and investment (eg see p 279). It is also evident in other areas of the main heads of competition policy, including the micro-economic reform agenda of government, which were the geneses of the Act and the Gas Code. As KPMG, advisers to several governments in setting up regulatory regimes, have put it:

*"We have National Competition Policy specifically because our utilities have failed to innovate and become more productive. They have been stuck on one S curve without the need or motivation to move. It is competition that normally drives the transition from one S curve to another. With a national monopoly different mechanisms must be used and one of the most important of these mechanisms is the form of regulation applied."* [2000, p9]

This emphasis on dynamism is also evident in the statements of governments in setting up their regimes. For instance, the Victorian Government has noted that in formulating its regulatory framework the priority was to "...encourage the development of a dynamic, efficient and sustainable electricity industry that would continue to deliver benefits to Victorian consumers into the future." Moreover, the Government was "adamant that it should contain strong incentives for ongoing improvements in efficiency."

There is no dynamic efficiency or innovation under the perfectly competitive model. None. As Littlechild notes, this is inherent in the assumptions of the model, and a major failure:

"The failure of the neo-classical approach to accommodate innovation is in some respects the most serious concern", and

*"The reliance on a model that does not recognise the possibility of innovation and economic change can give wrong diagnoses and harmful rather than helpful prescriptions for policy if it is applied in a sector in which these assumptions do not hold."* [2001, p9]

In its essence, the competition model argument is that there will be no innovation or technical progress if the returns to companies are fixed at the perfectly competitive rate. As the originators of workably competitive theory recognised sixty years ago, it is only the prospects of higher-than-perfectly competitive returns that will induce firms to undertake risky and uncertain innovational activities, and it is the surpluses from past earnings above the perfectly competitive level that are a necessary pre-condition for firms to react to this incentive.

*Take broad view of efficiency: foster wider public interest*

The Justices in the WASC dismiss the narrow concept of efficiency that has been applied by Australian regulators to date based on so-called “forward looking efficient costs” [eg WASC, p65]. Instead, they prefer a much broader view of efficiency, including public interest considerations [WASC, p68].

The Justices first refer to the three elements of economic efficiency – productive, allocative and dynamic – described by the Hilmer Report [WASC, pp55-64]. While they recognise that there can be tensions between these elements when considering actual or ‘commercial’ markets, they are clearly supporting a preference for dynamic efficiency. This is evident in a number of references to Hilmer and CoAG about maximising economic growth or making the pie as large as possible and promoting innovation and international competitiveness [WASC, pp 41-47 and 52-55].

How tensions may be resolved by regulators is made more explicit in WASC pp 65-66, where it is concluded that replicating a workably competitive market is consistent with maximising economic efficiency and would “approximate efficient costs”. This is an entirely different interpretation to that which has previously prevailed and states that the costs inherent in replicating workably effective outcomes are to be regarded as efficient. It implies a radically different approach to be employed by regulators which will no longer deliver precision as it “is not capable of precise or certain calculation and at best, can only be approximated” [WASC, p65]. It also reinforces the more general point of the Justices that the neoclassical approach is to be disregarded as it fails to promote dynamic efficiency (focussing instead on allocative efficiency, or at least, the neoclassical interpretation of allocative efficiency). Instead, dynamic efficiency is to be preferred even though it may not maximise allocative efficiency in the short term, and this state of affairs is to be regarded as ‘efficient’ under the law. Much the same argument has been put by the Productivity Commission and the Bureau of Industry Economics [1995] before it.

The Justices go further, stressing the importance to the public interest of the need for infrastructure investment. Quoting Hilmer, they note:

*“ ... the public interest would need to place special emphasis on the need to ensure access rights did not undermine the viability of long-term investment decisions, and hence risk deterring future investment in important infrastructure projects.”*

*The Justices also make clear that this public interest may include the private interest of anticipated ‘monopoly profit’ in some circumstances [WASC, p69].*

*Provide flexibility in price and profit controls*

The dynamic model of competition theory views the market as a process with no one state in that process being any better than any other. As the ICC notes:

*“In any given industry, there may be periods when many firms compete and profit levels tend toward the interest rate of the economy, followed by periods when through some innovation one or more firms leap ahead of the pack and enjoy entrepreneurial profits and ‘market power’. The more successful the innovation, the greater the ‘power’ to enjoy the profits. Conversely, the greater the entrepreneurial profit, the more incentive there is for competitors to close the gap on the market leader(s) by their own innovations.*

Two observations must be noted about the market process:

1. *There is no ‘normal’ length of time for either period. Innovative firms may stay ahead of the pack for days, weeks, or even centuries. On the other hand, close competition may also be a long-term feature of a given industry.*

2. *Periods of close competition are no more or less optimal than periods of individual entrepreneurial success.” [2002, pp8-9]*

Similarly, Littlechild notes:

*“All this has implications for profits. Some firms will turn out to have made a series of good judgements about what products to produce, what technologies to use, what inputs to buy (including management and staff), what marketing techniques to use and what prices to set. They will make profits, perhaps reflecting prices far above the costs of production, at least in the short term. Other firms will turn out to have made poor decisions, and will make low profits or even losses.” [Littlechild, 2001, p12]*

Thus the dynamic model provides for the possibility of a firm being rewarded persistently above normal profits where this is justified by a superior performance over its rivals with respect to efficiency or innovation, or otherwise satisfying consumer demands.

Once economic regulation shifts from the neoclassical to the workably competitive approach then the solid foundation of building up regulated prices from costs disappears, no matter how those costs are described – forward looking, backward looking or ‘efficient’. As the ICC remarks, it is an illusion that regulators, economists or courts are able to identify competitive pricing, as fostered by the “neoclassical mathematical methodology”. In fact, there is “ ... no way a competitive price can be identified either by the producer or by an outside observer” [2002, p14].

Of course, regulators have the discretion to have regard to costs but their determinations on prices and services offered must comply with the law. As the Justices remark:

*“The objective seems to necessitate the application of economic methods and theory, albeit to replicate the outcome of a workably competitive market. It is not necessary for the purposes of this decision to attempt to explore fully the implications of this in the full understanding and application of s.8.1(b). This is primarily the task of the Regulator within the bounds of the intended meaning of the provision.” [WASC, p59]*

But replicating the outcomes of workably competitive markets will not provide precise prices based on costs:

*“It is of some relevance to notice, however, that as a competitive market, in this sense of an economist’s understanding of a workably competitive market, is not a fixed and immutable condition with any absolute or precise qualities, but a process which involves rivalrous market behaviour.... As such, a workably competitive market will react over time and according to the nature and degree of various forces that are happening within the market. There may be a*

---

*degree of tolerance of changing pressures or unusual circumstances before there is a market reaction. The expert evidence and writings tendered in evidence suggest that a workably competitive market may well tolerate a degree of market power, even over a prolonged period.” [WASC, p60]*

Under the neoclassical approach, prices are linked to costs (including an ex-post “normal” return) under the unreal assumptions of the model. But in real world imperfect markets, workably efficient prices may lie anywhere from slightly above this level up towards monopoly prices, depending on the conditions that prevail at the time.

An efficient price (and profits) may be relatively low in the above spectrum if a firm is not performing any better than its rivals but quite high if it is outstanding. Prices should continue to remain high until rivals catch up or customers change their preferences about the services being provided. On the other hand, a firm which is performing poorly, with no innovation and little regard to discovering or satisfying consumer preferences, can expect low prices and profits or losses. That is the judgement the regulator has to make, taking into account the other objectives stipulated under the National Codes, including the public interest.

#### *No abuse of market power*

The specific issue of the legitimacy of Epic’s expectation of monopoly returns aside, the Justices in the WASC provide an interpretation of the fundamental issue of monopoly profits of general applicability. This does not imply that nothing should be done about such profits beyond those justified by the provisions of the Code, including the public interest. That interest included a recognition that lower prices in the short term:

*“ could be contrary to the public interest in the long term, because of the adverse effect on necessary future investment.” [WASC, pp66 and 68]*

This is in line with the dynamic model of workable competition. As Littlechild notes, regulators need to be satisfied that high profits are the result of superior performance or innovation not yet matched by rivals rather than some raw element of market power [2000, p15]. It is perhaps unfortunate that the term ‘monopoly profits’ is often misunderstood. To a competition economist, we should distinguish between profits which are justifiable because they relate to some form of superior performance and those which are unjustified because they result from some abuse of a natural monopoly aspect or a statutory ‘gift’.

How then may a regulator be satisfied that a price submission reflects a competitive price that does not exploit market power? This is a new area that needs to be developed in light of the Epic decision, but there are at least five means in the regulatory armoury.

First, it is now well-characterised in Australia (including Federal Court decisions) that abuse of market power results in a firm “giving less and charging more”. Clearly then, if a firm is giving more and charging less (for example, by lowering its prices and/or by increasing its quality, range of product or service levels) there is no need for regulators to intervene. (Of course, this does not exclude higher prices and even higher improvements in quality, range of services and so on.)

The Justices in WASC support this concept, first quoting the US Attorney General’s National Committee report:

---

*“The basic characteristic of effective competition in the economic sense is that no one seller, and no group of sellers acting in concert, has the power to choose its level of profits by giving less and charging more. Where there is workable competition, rival sellers, whether existing competitors or new potential entrants into the field, would keep this power in check by offering or threatening to offer effective inducements.” [WASC, p57]*

And then quoting from the Australian Competition Tribunal:

*“It is the possibilities of such substitution which sets the limits upon a firm’s ability to ‘give less and charge more’. Accordingly, in determining the outer boundaries of the market we ask a quite simple but fundamental question: If the firm were to ‘give less and charge more’ would there be, to put the matter colloquially, much of a reaction? And if so, from whom?” [WASC, p58]*

Logically, if utilities that are performing well against industry standards undertook to ‘give more and charge less’ in future, there would no need for economic regulation. Such companies would be emulating the rivalrous market outcomes required by the workably competitive model. The Productivity Commission appears to be following this ‘hands off’ approach with respect to recent decisions on the regulation of tugboats and airports and is in keeping with the New Zealand approach to regulating electricity distribution (which relied on S.36 of the New Zealand Commerce Act for many years). To explicitly recognise this in law, a ‘sister’ section to S.46 of the Trade Practices Act 1974 could be drafted to provide this light handed regulation. ENERGEX has made such a submission to the “Committee of Inquiry (Dawson Inquiry) into the Competitive Provisions of the Trade Practices Act 1974, and their Administration” [June 2002]. The report of the Dawson Inquiry is expected early in 2003.

The thrust of this new section would be to hold that there is no abuse of market power if the designated firm gave more and/or charged less. For example, price increases would be acceptable if in real terms they constituted a lower charge, or if they were associated with a demonstrably higher quality products or service, or a wider range of products or services. The effect of such a provision would be akin to a charter of conduct being imposed on nominated firms. If they agreed to be bound by it, this could effectively result in an undertaking to the Federal Court, a breach of which would suffer the usual consequences of such a breach. At the very least, any breach would result in the firm being bound yet again to price and profit control or to formal surveillance and monitoring.

Secondly, regulators may be comforted by evidence that customers are willing to pay for the services on offer. It is a fundamental principle of economics that parties enter into trade or an agreement because they believe they will benefit. If the regulator ensures that customers are well informed of their options and, having made their choice, the supplying firm is held to its commitment, then the requirements of a workably competitive market have been achieved.

Thirdly, regulators will also need to recognise the willingness of firms to supply. They face the risk and expense of innovation and undertaking other improvements and, at a minimum, the regulator should have regard to the hurdle rates applied by Boards in prudently deciding on infrastructure and R&D projects. There is also the reward aspect. In a workably competitive market, an innovative firm is justifiably rewarded with persistently above normal profits, indicating that it has discovered a superior manner in which to continually please its customers over time. This is neither abuse of market power nor evidence of a failure of market forces. On the contrary, the firm is demonstrating that it is exceptionally obedient to those forces and its ‘power’ in the market is nothing more than consumer approval.



---

Fourthly, the regulator should have evidence to show where the regulated company lies in relation to its 'rivals' or peers. Is it a poor, average, good or outstanding performer? Benchmarks can be considered across a spectrum of criteria – reliability, costs, quality and so on.

Finally, regulators can take considerable comfort from the previous heavy-handed cost of service regimes that have been applied. There is little prospect of any significant stock of unjustified monopoly rent remaining (if there was much before) in Australian regulated utilities where cost of service reviews have been conducted. Therefore, there can be no abuse of market power going forward, where the previous force criteria are met. Reviews have been conducted at least once and sometimes twice on such businesses. Moreover, regulators retain their discretion to conduct a cost of service investigation. They could have regard to such analyses in making judgements about pricing proposals, including the public interest of having greater investment as stressed by the Justices in WASC and the Productivity Commission.



---

## **Attachment 2: Assessment of Price Service Offerings by Professor Stephen C Littlechild**

As submitted to the Queensland Competition Authority in December 2002, in the determination of the Form of Regulation for Electricity Distribution to commence from 1 July 2005.

---

**Stephen C Littlechild**

**Honorary Professor, University of Birmingham Business School  
Principal Research Fellow, Judge Institute of Management Studies, University of  
Cambridge<sup>1</sup>**

### **5. Terms of Reference**

ENERGEX Limited has proposed the concept of price-service offerings as a mechanism of utility regulation. On 12 November 2002 ENERGEX Limited asked me:

“to assess price-service offerings with respect to the following criteria:

- (1) accords with developing thinking on the nature of competition
- (2) is practical, robust, and feasible as a method of regulating energy networks.”

The following is my report.

#### 5.1.1.1.1 Contents

1. The concept of price-service offerings
2. The Queensland Competition Authority Review
3. The development of utility regulation
4. The Western Australia Supreme Court Decision
5. Developing thinking on the nature of competition
6. Whether price-service offerings is in accordance with developing thinking on the nature of competition
7. Whether price-service offerings is practical, robust, and feasible as a method of regulating energy networks
8. Overall conclusions

Appendix 1 Author's qualifications

Appendix 2 Price-service offerings: Summary by ENERGEX

Appendix 3 The development of utility regulation: further details

---

<sup>1</sup> For additional information on the author's qualifications, see Appendix 1.



---

Appendix 4 The Western Australia Supreme Court decision: further details  
Appendix 5 Developing thinking on the nature of competition: further details

## 6. Executive Summary

### 6.1.1 1. *The concept of price-service offerings*

1. ENERGEX has proposed the concept of price-service offerings as a mechanism for recreating the customer choices and other conditions that prevail in workably competitive markets. It is envisaged that ENERGEX would offer a range of packages of services to customers, each with differing service standards and associated tariffs. Rewards and penalties would be associated with meeting or failing to meet particular targets. The packages would incorporate views expressed by customers during consultations. ENERGEX would strike a contract to provide services at a certain, mutually agreed price, and the regulator would oversee and enforce the contract on behalf of customers.

### 6.1.2

### 6.1.3 2. *The Queensland Competition Authority Review*

2. The proposal by ENERGEX responds to the Review of the Form of Regulation of Electricity Distribution initiated by the Queensland Competition Authority in October 2002. That Review notes that the National Electricity Code sets out objectives for the National Electricity Market, and that the Code provides for “a regime of light-handed regulation of the market to achieve the market objectives”.

### 6.1.4

### 6.1.5 3. *The development of utility regulation*

3. Traditional US rate of return utility regulation has increasingly been replaced by what might be called standard price cap regulation. This seeks to provide greater incentives to efficient production, and has proved broadly successful, not least in reducing charges for use of the networks. However, there have been concerns that it may have been applied in an unduly “heavy-handed” way, including in the UK and Australia. Some have feared that this might thereby discourage equity investment and innovation over time, and might adversely impact on quality of service, to the ultimate detriment of customers.

### 6.1.6

### 6.1.7 4. *The Western Australia Supreme Court decision*

4. The Western Australia Supreme Court decision (23 August 2002) in the Epic Energy case has important implications for utility regulation in Australia. The Court noted that the Access Code for gas pipelines says that the Tariff should be designed with a view to, inter alia, replicating the outcome of a competitive market.
5. The Court decided that this is a reference to a workably competitive market, rather than to a perfectly competitive market. It noted that a workably competitive market is a process. It described this as a field of very active endeavour by economists, with older views being constantly further developed and new views emerging.
6. The Court said further that a workably competitive market might well tolerate a degree of market power, even over a prolonged period. However, in its view the underlying theory and expectation of economists was that, with workable competition, market forces will

increase efficiency beyond that which could be achieved in a non-competitive market, although not necessarily achieving theoretically ideal efficiency.

7. The Court noted that the term “efficient costs” should include technical or productive efficiency, allocative efficiency, and dynamic efficiency. The Court referred to striking the most appropriate balance between the interests of customers and the service provider. It commented that the expert evidence suggested a growing awareness of the long term disadvantages of striking the balance with too great an emphasis on the interest of consumers in securing lower prices, and without due regard to the interest of the service provider in recovering both higher prices and its investment.

#### 6.1.8

#### 6.1.9 *5. Developing thinking on the nature of competition*

8. Perfect competition assumes many buyers and sellers, hence no market power. It also assumes perfect knowledge, hence equilibrium. Perfect competition is productively efficient by assumption, and can be shown to achieve allocative efficiency. However, the concept of dynamic efficiency is non-existent in a world of perfect knowledge and equilibrium.
9. Scherer has summarised the early ideas of workable competition in terms of 16 norms of structure, conduct and performance. J M Clark, the originator of the concept, emphasised three groups of objectives, associated with the elements required for progress, the diffusion of the benefits of progress, and the conditions of competitive rivalry. Both sets of criteria emphasise quality and quality differentials as well as price, and technical progress and innovation as well as productive efficiency.
10. Later developments in thinking on the nature of competition include the Austrian concept of competition as a discovery process, the implications of asymmetric information, public choice ideas about market failure and government failure, and the significance of transactions costs.

#### 6.1.10

#### 6.1.11 *6. Whether price-service offerings accords with developing thinking on competition*

11. Price-service offerings places greater weight on certain factors - including developments and innovations in quality and variety of products and services - than does the conventional price cap approach to utility regulation. It is thus potentially more consistent with the concept of workable competition.
12. Price-service offerings also provides more explicitly for discovering and meeting the needs of customers themselves. It is thereby more sympathetic to Austrian ideas of competition as a dynamic market process
13. It is more capable of overcoming certain public choice obstacles, though the incentives operating on the customer representatives should not be overlooked.
14. Price-service offerings seems likely to have higher transactions costs of discovering the costs of companies and preferences of consumers. However, the extent of this would depend on the powers granted to the proposed customer groups.
15. These costs of acquiring information and negotiating lead to a reservation about the ability of price-service offerings to assess and ensure productive efficiency and appropriate levels of profit. Subject to that qualification, price-service offerings seems to be broadly consistent with developing thinking on competition. It is closer to workable competition and its recent developments than is standard price cap regulation, particularly in terms of discovery of, and response to, customer preferences in relation to quality of service dimensions.

#### 6.1.12

#### 6.1.13 7. Whether price-service offerings is practical, robust and feasible

16. There might be questions whether electricity distribution provides sufficient scope to offer the kinds of options described in the price-service offerings outline, and whether these would be sufficiently attractive to customers. Ultimately these would be matters for customers themselves to judge. This concern should not preclude a move in the direction of price-service offerings. Further and better information about what options it is feasible to provide, and what customer preferences are in these respects, would be a useful outcome of such a price-service offerings process.
17. A second concern refers to selection of customer representatives. Experience elsewhere suggests that representatives of adequate stature and responsibility would be willing to participate. This might be facilitated by financial support approved by the regulator.
18. The main concern is that customers would have unequal information and bargaining power relative to the incumbent regulated monopoly. A related concern is that the proposed process seems to imply that the customers passively choose only between the alternatives offered by the company. As a result, although customers might get a better deal in some respects, it might not be as good a deal as it could be.
19. These concerns could be met by giving the customer representative groups adequate powers to obtain relevant information from the company, and to hire professional advice. There could be a degree of competition by comparison and where possible by direct provision. Customer groups could propose options of their own as well as react to options proposed by the company. There would be active negotiation on both sides. The regulator could have (or retain) a backstop power to determine the terms of the contract or price control in the event that customer groups and the company were unable to agree such terms.
20. Another concern might be about cost allocation and relative pricing. Decisions or processes might potentially advantage some groups of customers at the expense of others, or might distort competition in related services. This could be met by providing adequate information to all parties, and by appropriate regulatory guidance and supervision.
21. On this basis it seems to me that price-service offerings could be adapted to be a practical, robust and feasible method of regulating energy networks.

#### 9. Overall conclusions

22. Standard price cap regulation has tended to supplant rate of return regulation and has significant achievements to its credit, but there are also concerns. It is opportune to look for ways of improving on this approach.
23. Price-service offerings has advantages in terms of discovering and meeting the needs of customers, especially with respect to quality. It also acknowledges the different needs of different customers.
24. There may be reservations in terms of the scope for significant improvement, the availability of responsible customer groups and the potential for distortions in pricing. However, these concerns can be dealt with.
25. More important is the concern about the information and bargaining power of customer groups, relative to that of the incumbent company. There is a danger that price-service offerings could bring improved sensitivity to quality preferences and to innovation, but at the expense of prices, profits, costs and productive efficiency.

26. There is therefore a case for expanding the provisions of price-service offerings to secure customer access to comparable information as the regulator has, and for the regulator to act as backstop.
27. With these qualifications, price-service offerings substantially accords with developing thinking on the nature of competition, and could be practical, robust and feasible as a method of regulating energy networks. It deserves very serious consideration.



---

## 1 The concept of price-service offerings

ENERGEX Limited (henceforth ENERGEX) has proposed the concept of price-service offerings (henceforth PSO). For present purposes ENERGEX has set out this concept as in Appendix 2. I note that similar ideas have been proposed elsewhere by United Energy<sup>2</sup> but I have not drawn on that material here.

PSO is described as “a mechanism for recreating the customer choices and other conditions that prevail in workably competitive markets”.

ENERGEX envisages that it would “offer a range of packages of services to customers - each with differing service standards and associated tariffs” Initially these would be mutually exclusive options for most customers; over time ENERGEX will develop more tailored packages to offer to groups of customers. Initially there would be three broad price-service offerings: a base case option that would maintain current service levels at minimum cost, and a customer value option and a customer premium option that would offer additional and higher quality services. “The customer value and customer premium options would be offered as packages with enhanced service offerings. ... These packages would incorporate views expressed by customers during consultations.”

The aim of PSO is to provide a more satisfactory regulatory environment. “ENERGEX is concerned about the possibility of ongoing application of a cost based regime.” It considers that this “is not focussed on outcomes such as meeting customer demand for particular reliability levels” and “creates a degree of uncertainty”. “This type of regime is not well-suited to adjusting to changing customer demands, or providing a secure basis for future investment.” An incentive based regulatory regime will provide an environment where ENERGEX is better motivated to achieve improvements in quality and price.

Examples of improved services that could be offered include safety, undergrounding, environment (eg losses), reliability, hardship fund, regional development, and customer service.

The proposed approach envisages a greater role for customer relationships. “At present, the regulator effectively sets service standards ... customers are not involved in this process. ENERGEX envisages that under price-service offerings, a different relationship would form among itself, the regulator, and customers. ENERGEX would strike a contract to provide services at a certain, mutually agreed price, and the regulator would oversee and enforce the contract on behalf of customers.”

Price-service offerings would take the form of a weighted average price cap. “The cap would be set according to customer willingness to pay rather than on a cost basis... ENERGEX would stand to receive rewards if it bettered specified service standards, or to be penalised if it failed to meet these targets.”

Additional mechanisms would protect customer rights and ensure better value than under cost based regulation. These include the present price-service situation as a base case option;

---

<sup>2</sup> For example, United Energy, *Responses to Office of Regulator General Consultation Paper Nos.1 to 5 and Draft Decision*, October 1998 to July 2000.



---

penalties for failure to perform, enforced by the regulator; power for the regulator to impose industry benchmarks in provision of services; ability of regulator to accept or commission independent market research as to willingness of customers to accept a chosen option; and the possibility of registering price-service offering under the Trade Practices Act, which would give enforcement rights.

ENERGEX describes the process of full consultation with customers that it envisages. It considers that “a regulatory regime that creates an environment in which utilities are induced and driven to achieve continuous improvement is essential, and will result in greater satisfaction of customer demand”.

## 7. 2. The Queensland Competition Authority Review

In October 2002 the Queensland Competition Authority (QCA) initiated a *Review of the Form of Regulation of Electricity Distribution*. The Review notes that the National Electricity Code sets out objectives for the National Electricity Market. The Code provides for the QCA to regulate distribution prices from 19 December 2000, and to prepare ring-fencing guidelines.<sup>3</sup>

The QCA has already set regulatory arrangements for 1 July 2001 to 30 June 2005, which apply to the two distributors ENERGEX and Ergon Energy. The QCA notes that it has opted to regulate the electricity distribution networks by setting a fixed revenue cap for each of the four years of the proposed initial regulatory period. In doing so it has “aimed to remove the possibility for the distributors to use their monopoly position to extract more than a fair price for the services they provide” (page 1).

The QCA is required to give two years notice if it proposes to amend the form of economic regulation, and to publish a process and timetable for doing this. The options for the form of regulation that the QCA puts forward and discusses are the revenue cap approach, a weighted average price cap, and combinations of these two approaches.

These seem relevant options to examine, and the subsequent discussion is well informed. Nevertheless, this seems a relatively narrow concept of the kinds of changes in the form of regulation that might be considered.

For example, the QCA notes that the Code provides for “a regime of light-handed regulation of the market to achieve the market objectives.” (page 1) This would seem to merit further exploration, since there have been various concerns on this score, in Australia and elsewhere. Although price cap regulation sought to minimise the detailed involvement of the regulator, and has numerous successes to its credit, concerns have been expressed about the “heavy-handed” ways in which some price caps have been implemented in Australia, the UK and elsewhere. Section 3 summarises some pertinent aspects of the development of modern utility regulation.

Recently, the recent Western Australia Supreme Court rejected the concept of perfect competition that has hitherto been influential in regulatory economics, at least in theoretical discussions thereof. The Court adopted instead the concept of workable competition. The Court’s reasoning must necessarily influence all Australian regulatory decision-making in future. Section 4 sets out some key findings, arguments and conclusions of the Court.

In view of the Court decision, Section 5 looks more closely at the concept of workable competition to which the Court referred and contrasts it with the concept of perfect competition

---

<sup>3</sup> My understanding is that the regulation in question applies to the distribution business only, and that retail supply is or will be a separate and potentially competitive activity that is separately regulated. Consequently, PSO is to be evaluated in terms of its impact on the distribution business and not the retail supply business – except to the extent that it might impact on the effectiveness of arrangements for regulating the retail supply business.



---

that the Court rejected. Section 5 looks also at other recent developments in economists' thinking about the nature of competition.

All these considerations suggest that there is merit in a broader look at some of the possible options for amending the form of economic regulation in Queensland. These considerations also facilitate an understanding of the criteria applicable to the present assessment of PSO.

---

### 3. The development of utility regulation

Traditional US rate of return regulation of utilities was based on protecting users against “natural monopoly”. It did so by allowing revenues to cover just and reasonable operating costs plus a reasonable return on prudent investment.

During the 1960s economists increasingly criticised this approach. A main concern was that it provided inadequate incentive to productive efficiency.

Since the 1980s this rate of return approach has been increasingly replaced by incentive price cap regulation. This typically takes the form of a price cap CPI-X, that requires average prices to fall by X per cent a year below the rate of inflation as measured by the Consumer Price Index CPI. The cap is specified for a defined period of years, typically five. The cap is then reset so as to pass on to customers a share of the benefits of increased efficiency, and to provide an appropriate challenge for the next period.

This form of regulation seeks to provide greater incentives to efficient production. It has proved broadly successful, in Australia and elsewhere. It has stimulated considerable increases in technical efficiency and reductions in operating costs. It has also led to reduced charges for use of the electricity transmission and distribution networks.

However, there have been concerns that this form of regulation may have been applied in an unduly “heavy-handed” way. Such concerns have been expressed in various countries and jurisdictions, including in the UK and Australia. The concerns include the extent of regulatory involvement in detailed assessment of potential operating costs and capital expenditure; unduly tight price caps; and too little incentive to improve quality and to innovate.

Some commentators have feared that, while price cap regulation has brought undoubted benefits, there are also risks. The way in which it has been implemented might discourage equity investment and innovation over time, and might adversely impact on quality of service, to the ultimate detriment of customers.<sup>4</sup>

These issues are discussed in more detail in Appendix 3 below.

---

<sup>4</sup> In the UK, see for example the National Audit Office, *Pipes and Wires*, HC 723 Session 2001-2, 10 April 2002.

---

#### 4. The Western Australia Supreme Court decision

On 23 August 2002 the Western Australia Supreme Court (henceforth the Court) issued its decision in the Epic Energy case. Although the decision involved a gas pipeline company, it has important implications for utility regulation generally in Australia, not least of the regulation of electricity distribution.

The Court noted that the Access Code for gas pipelines says that the Tariff should be designed with a view to, inter alia, a) providing the opportunity to earn a stream of revenue that recovers the efficient costs of delivering the service over the expected life of the assets, b) replicating the outcome of a competitive market and c) not distorting investment decisions.

We summarise here its findings on each of these main issues.

##### 7.1.1 *Replicating a competitive market*

The Court decided that a reference to a competitive market is to a workably competitive market, rather than to a perfectly competitive market. It noted that a workably competitive market is itself a variable and varying state of things – or rather it is a process. It is a field of very active endeavour by economists, with older views being constantly further developed and new views emerging<sup>5</sup>

The Court said further that a workably competitive market might well tolerate a degree of market power, even over a prolonged period. The underlying theory and expectation of economists, however, is that with workable competition market forces will increase efficiency beyond that which could be achieved in a non-competitive market, although not necessarily achieving theoretically ideal efficiency.

##### 7.1.2 *Efficiency and efficient costs*

The Court noted that the term “efficient costs” should include technical or productive efficiency, allocative efficiency, and dynamic efficiency. It followed the Hilmer Report in this matter.<sup>5</sup> Productive efficiency is the production of goods and services at least cost. Allocative efficiency is the production of those goods and services that maximise the value to customers. Dynamic efficiency is the responsiveness of technology and products to changes in consumer tastes, and the creation of new products and production processes.

The Court decided that “providing ... the opportunity to earn a stream of revenue that recovers the efficient costs” did not mean “no more than the efficient costs”. Nor did it mean “at least the efficient costs”.

---

<sup>5</sup> Hilmer Report 1993 (Independent Committee of Inquiry into Competition Policy in Australia), *National Competition Policy: Report by the Independent Committee of Inquiry into Competition Policy in Australia*, AGPS, Canberra.

### 7.1.3 *Balancing objectives*

The Court referred to striking the most appropriate balance between the interests of customers and the service provider. It commented that the expert evidence suggested a growing awareness of the long term disadvantages of striking the balance with too great an emphasis on the interest of consumers in securing lower prices, and without due regard to the interest of the service provider in recovering both higher prices and its investment.

### 7.1.4 *Not distorting investment decisions*

The Court discussed the meaning of not distorting investment decisions. It concluded that this would not be met simply by confining the amount recovered to the replacement cost of the pipeline. Maintaining and encouraging future investment required giving investors confidence that sound long term investment decisions are not rendered loss-making by virtue of future governmental intervention. Although writing down certain capital investments offered the advantage of lower prices for consumers in the short term, this could be contrary to the public interest in the long term, because of the adverse effect on future investment. The Code did not deny the potential relevance of past investment decisions to the design of a reference tariff or a reference tariff policy.

---

## 5. Developing thinking on the nature of competition

The Court noted that four distinct notions of competition had been put to it, of which two were said to be in current economic usage. These were perfect competition and workable competition. It also emphasised that the concept of workable competition was a constantly evolving one. The following notes briefly explain the two initial concepts of perfect competition and workable competition, and their relationship to the three concepts of efficiency to which the Court referred. There is also some discussion of various recent developments in thinking about competition.

### 7.1.5 *Perfect competition*

Perfect competition assumes many buyers and sellers, hence no market power. It also assumes perfect knowledge, hence the market is in equilibrium.<sup>6</sup>

In terms of the three aspects of efficiency, perfect competition is productively efficient by assumption. It can be shown to achieve allocative efficiency. However, the concept of dynamic efficiency is non-existent in the perfect competition world of perfect knowledge and equilibrium.

### 7.1.6 *Workable competition*

Workable competition was developed just over half a century ago. F M Scherer has summarised the early ideas of workable competition in terms of 16 norms or criteria of structure, conduct and performance.<sup>7</sup> The structural norms require their being enough traders, no restrictions on entry and moderate price-quality differentials. The conduct criteria require uncertainty about rivals' response, no collusion, no anti-competitive tactics, no permanent inefficiency, no misleading sales promotions and no harmful price discrimination. The performance criteria include efficient production, not excessive costs, profits just sufficient for investment and innovation, responsiveness to consumer demand, technical progress and success accruing to those who best meet customer wants.

J M Clark, the originator of the concept of workable competition in 1940, said that perfect competition was "one-legged", focusing on static cost-price equilibrium to the neglect of the dynamic objectives of progress. He emphasised three groups of objectives. He considered that the elements required for progress were most important. Second were the objectives

---

<sup>6</sup> For example, George J Stigler, "Competition", chapter 2 in his *Organization of Industry*, Irwin Inc., Homewood, Ill., 1968. Two additional requirements of competition are no collusion and divisibility of the commodity being traded.

<sup>7</sup> Frederic M Scherer, *Industrial Market Structure and Economic Performance*, Rand McNally & Co, Chicago, 1970, p. 37.

---

concerned with the diffusion of the benefits of progress. The third set of objectives concerned the conditions of competitive rivalry.

Both sets of criteria surrounding workable competition emphasise quality as well as price, and technical progress and innovation as well as productive efficiency.

There have been numerous later developments in thinking on the nature of competition. We focus here on three of these.

#### 7.1.7 *Competition as a process*

The concept of competition as a process taking place over time has been developed by Austrian writers including Schumpeter, Hayek and Kirzner.<sup>8</sup> Schumpeter saw competition as “a perennial gale of creative destruction”. The prospect of profits provided the incentive to innovate, and at the same time the mechanism whereby these profits would tend to be eliminated by subsequent innovation. Hayek emphasised that knowledge was dispersed and not all known to one person or organisation. Competition was a mechanism for discovering the tastes of customers and the ability of different firms to meet these. Kirzner saw entrepreneurship as alertness to overlooked opportunities, as the vehicle by which the market process tends to coordinate production decisions with consumer tastes.

Other economists have focused on the implications of asymmetric information, as between the regulator and the regulated firm, in a way that is different from the focus of Austrians. They have explored in more detail the kinds of regulatory mechanisms that might induce firms to reveal the information that the regulator does not have.

#### 7.1.8 *Public choice*

The concepts of public choice and economic regulation sought to explain the behaviour of public sector bodies in parallel with the behaviour of private sector firms. Proponents of this approach see government and regulators responding to political pressures rather than profit. They developed the concept of government failure to parallel that of market failure. An implication is that, even where markets do not work as well as one would like, regulation or other government action cannot necessarily be relied upon to make things better.

#### 7.1.9 *Transactions costs*

Yet other economists have looked at the nature and implications of transactions costs. Amongst other things, they have sought to explain the size and nature of firms, as devices for economizing on the costs of transacting in the market. For present purposes a potentially relevant issue is how far regulation has lower transactions costs – and in that sense is a more efficient way of achieving its purposes - than other methods of dealing with monopolies by contracting in the market.

---

<sup>8</sup> For a recent set of essays on this theme, see Israel M Kirzner, *The Meaning of Market Process: essays in the development of modern Austrian economics*, London and New York: Routledge, 1992.



## 6. Whether price-service offerings accords with developing thinking on the nature of competition

In the past, many of the writings of economists about utility regulation reflected the concept of perfect competition, and in particular the case for setting price equal to marginal cost. The main focus of this work has been to secure allocative efficiency.

The Court judgement points to other kinds of efficiency as also important. Economists are increasingly conscious of these. The use of price caps (rather than rate of return regulation) aims to secure the benefits of productive efficiency. The original intention of price cap regulation in the UK was to facilitate the achievement of dynamic efficiency too, though in practice this aspect has tended to be downplayed.

ENERGEX proposes that the form of regulation it calls price-service offerings (PSO) should be adopted by the QCA instead of the present form of regulation. This section seeks to evaluate PSO against developing thinking on the nature of competition. The latter phrase is interpreted in the context of the recent Court judgement that competition is to be understood in terms of workable competition rather than perfect competition, and in terms of “a field of active endeavour by economists, with older views being constantly further developed and new views emerging”. I shall therefore appraise PSO against five criteria in turn:

- a) the concept of workable competition as developed and summarised by Scherer
- b) the thinking of J M Clark himself in a subsequent appraisal
- c) competition as a process
- d) public choice, and
- e) transactions costs.

A final subsection will summarise the conclusions.

It will generally be helpful to evaluate PSO relative to what I will call standard price cap regulation, reflecting the general features of practice in the UK and Australia as far as I am aware of them. I am not in a position at present to say how far the particular regulation set by the QCA conforms to this standard price cap regulation, although it would be surprising if it were significantly different.

### a) Scherer’s criteria for workable competition

The 16 criteria outlined by Scherer, as set out in Appendix 4, were presumably drawn up to deal with a sector that might be more or less competitive, rather than one where the scope for competition is either assumed to be non-existent or very limited. We may therefore deal first with several of those criteria that seem to have limited relevance to this particular inquiry. We then deal with the other criteria, sometimes in groups to avoid repetition.

Criteria 1, 2, 4, 5, 6 and 15, concerning number of traders, entry, uncertainty about rivals’ responses, independence, no unfair tactics, prices not intensifying cyclical instability.

In discussions of regulating electricity distribution networks, it is generally assumed that economies of scale permit only one firm operating on an efficient basis in each distribution area, and that this is independent of any artificial barriers to mobility and entry. The criteria concerning uncertainty of response by rivals, and absence of collusion and unfair tactics, and relationship to cyclical stability, are relevant to a competitive situation (including generation and retail supply) but of much less relevance in the case of an electricity distribution business. In these respects PSO does not seem to differ significantly from standard price cap regulation.

It would no doubt be helpful for the regulator to take a pro-active line in seeking to facilitate competition in the provision of some distribution services. It would also seem helpful for there to be rivalry, and not collusion, between different distribution companies in different areas, so that customers and the regulator are able to observe and compare the performance of different companies. All these would not seem incompatible with either PSO or standard price cap regulation, and arguably would improve the performance of both.

Criteria 3, 13, 14 and 16, concerning quality differentials, output and quality responsive to consumer demands, opportunities for introducing superior new products, and rewarding sellers who best serve consumer wants.

Standard price cap regulation is not unmindful of the importance of all these issues. It seeks to provide incentives to companies to respond to customer's' needs, and to innovate. The issue is the relative importance it attaches to these issues, and how well it achieves these criteria compared to how PSO might do so.

Standard price cap regulation has not emphasised the concept of "moderate and price-sensitive quality *differentials*". Indeed, the pressure on regulators is to avoid differentials, which are difficult to explain and justify. In contrast, PSO makes a feature of offering "a range of packages of services to customers – each with differing service standards and associated tariffs". Admittedly for most customers these different packages would initially be mutually exclusive, implying that only one package will be put into effect at any time. However, PSO envisages that "Over time, ENERGEX will develop more tailored packages to offer to groups of customers or individual customers as differentiated service delivery systems are further developed." In addition, "Some other differentiated packages will be offered to certain large customers, certain locations, and certain types of customers (eg hospitals)."

For the most part, meeting output levels does not seem to be an issue as between PSO and standard price cap regulation. The important potential exception is that PSO might lead to fewer and shorter outages than standard price cap regulation, and to improved quality of service generally, if this is what customers indicated that they wanted. Although standard price cap regulation seeks to ascertain and meet the demands of customers, PSO would aim to be more attuned to these demands. Integral features of PSO are that it would offer packages between which customers would choose, and that the packages themselves would reflect the views of customers.<sup>9</sup>

Both standard price cap regulation and PSO would seem to offer opportunities for introducing technically superior new processes. Standard price cap regulation would mainly provide incentives to do this insofar as such processes would reduce costs within the period of any price cap. PSO could offer greater incentive to do this over a longer period if the price cap agreed with

---

<sup>9</sup> "These packages would incorporate views expressed by customers during consultations. ... The customer value and customer premium options would offer additional and higher quality services as determined by surveys of customers and consultations with representative community groups. ... ENERGEX is committed to a process of full consultation with customers in further developing and refining its price-service offerings. It proposes to continue to survey customers to better understand their needs, and to develop price-service offerings in consultation with a range of community groups, local Councils, and specific customers."

customers provides for this. It could also provide greater ability and incentive to introduce new products, again provided that these products are what customers want.

Standard price cap regulation assumes that the regulated supplier will serve the requirements of consumers (as defined by the regulator), and success accrues to those who do this at least cost, or with most productive efficiency. This raises the question whether the standard process for defining the price cap and associated investment necessarily reflects the wants of consumers. PSO seeks more explicitly to ascertain those wants, and to reward the supplier for meeting them.

In all these four respects, PSO seems to be closer to workable competition than does standard price cap regulation.

Criteria 7 and 10, concerning productive efficiency and not shielding inefficient suppliers permanently.

The concern to ensure productive efficiency, and not to shield inefficient suppliers, has been at the forefront of standard price cap regulation. It is perhaps the main distinguishing feature of this form of regulation compared to the previous rate of return regulation. This is evidenced, for example, in the use of evidence on comparative performance and the use of consultants to assess what the efficient costs of a distribution company would be.

In contrast, PSO avoids or minimises the reference to cost. “ENERGEX is concerned about the possibility of ongoing application of a cost based regime. A cost based regime focuses, at a detailed level, on determining the cost of delivering a base level of service with the single incentive of constraining costs. ... Price-service offerings would represent a form of weighted average price cap arrangement. The cap would be set according to customer willingness to pay rather than on a cost basis.”

Two points should be put in defence of PSO on these two efficiency criteria. First, PSO also envisages the use of price caps, rather than rate of return. It would therefore seem to be in the interests of firms themselves to operate efficiently under PSO. As with standard price cap regulation, a PSO price cap would provide greater incentive to efficiency than a rate of return arrangement with cost pass-through.<sup>10</sup>

Second, the concept of workable competition has stressed the importance of other factors as well as price and cost, and the Court decision makes this point too. ENERGEX’s concerns relate to an *undue* focus on cost. “This [a cost based regime] means that the regime is not focused on outcomes such as meeting customer demand for particular reliability levels. ... [and] is not well suited to adjusting to changing customer demands, or providing a secure basis for future investment.” ENERGEX envisages that the regulated company would be under pressure to meet specified benchmarks, with associate rewards and penalties, and that this could be a hard taskmaster, driving the company to increase efficiency in the dimensions most relevant to customers.

---

<sup>10</sup> Insofar as PSO could involve a greater use of cost pass-through in order to provide higher quality, then the possible impact on efficiency would need consideration. But this is a matter on which PSO would envisage taking the views of customers.

---

This is consistent with the general thrust of workable competition. However, it raises the question of how far the effectiveness of price cap regulation depends on the price caps being sticks as well as carrots. In order to maximise productive efficiency, how far is it necessary to ensure that the price caps bear heavily on the company? In the PSO context, how are the standards are to be set, and how effective will be the envisaged “additional mechanisms built in to price-service offerings to ensure customer rights are protected, and in particular to ensure customers receive better value for money than they would under cost based regulation”?

PSO, while taking due account of important non-price factors such as reliability, must ensure that it is not vulnerable to a charge of shielding inefficient distributors permanently. In order to secure effective and sufficiently challenging standards, those setting or approving the controls need to have adequate information about actual and potential costs than customers or customer groups would normally have to hand.

Criterion 12, concerning profit levels.

Regulators and proponents of standard price cap regulation argue that it should and does set prices to as to allow profits at levels just sufficient to reward investment and efficiency. As discussed above, there is some difference of view as to whether such levels are achieved in practice – in the UK, some contend that the early levels were too high, others that recent levels have been too low. There has been little focus on innovation other than as a means of increasing efficiency in the short-term.

It seems possible that PSO would have two main impacts in this respect. First, PSO could provide more adequate levels of profit than price cap regulation if customers consider that this is either more reasonable or prudent in order to achieve the levels of quality and other service that they desire. Second, because PSO would focus more on discovering and supplying what customers wanted, it could provide more incentive and more adequate reward for innovation than standard price cap regulation might do.

Against this there is the potential concern that profits could be unreasonably high under PSO, and that customers would be unable to challenge this effectively, for reasons discussed under criteria 7 and 10 above.

Criteria 8, 9 and 11 concerning misleading sales promotion, price discrimination and excessive promotional expenses

The requirement that sales promotion should not be misleading, that promotional expenses should not be excessive, and that there should not be persistent harmful price discrimination, may seem of limited relevance to a monopoly business. Indeed, standard price cap regulation takes little if any account of these factors in the context of regulating the monopoly distribution network business.<sup>11</sup>

---

<sup>11</sup> Regulators have of course examined sales promotion and promotional expenses by retail suppliers, and also concerned to ensure that incumbent monopoly positions in distribution are not used to favour particular retail supply businesses.

However, PSO involves the distribution company offering alternative packages to the customer. Presentation is inevitably part of this, and so too are promotional expenses. So PSO is more consistent with workable competition in that it recognises the relevance of these issues more than standard price cap regulation does. By the same token the regulatory framework for PSO would need to ensure that the associated sales promotion is not misleading and that the promotional expenses are not excessive.

The PSO price cap would evidently be set according to customer willingness to pay. Since willingness to pay would differ between customers, it would seem that PSO could involve price discrimination. This might only be the case insofar as different customers could be supplied with different service packages at the same time, which is not envisaged initially. It is also not obvious that any price discrimination would be harmful. Nevertheless, as with promotional activities, this is something on which assurances might need to be provided, as discussed below.

To summarise, six of the 16 criteria of workability listed by Scherer (numbers 1,2,4,5, 6 and 15) appear to have limited if any relevance to the issue of regulating monopoly distribution networks. On four criteria – those associated with quality differentials (3), qualities responsive to consumer demands (13), opportunities for introducing superior new products (14), and rewarding sellers who best serve consumer wants (16) - PSO seems to be closer to workable competition than does standard price cap regulation. On two criteria - securing productive efficiency (10) and preventing inefficient suppliers from being shielded permanently (7) - there seems a possibility that PSO would be less effective than standard price cap regulation. It is more difficult to judge PSO against the criterion of profit levels just sufficient to reward investment, efficiency and innovation (12) – it scores higher on the investment and innovation aspect but possibly lower on the productive efficiency aspect and with respect to the possibility of excess profit. The remaining three criteria refer to sales promotion, price discrimination and promotional expenses (8,9,11). PSO provides for greater acknowledgement of such activities than does standard price cap regulation, and in that sense is closer to the concept of workable competition. However, by the same token PSO needs to take greater care to avoid the concerns about misleading, harmful or excessive conduct of these activities.

#### **b) J M Clark's three groups of objectives of workable competition**

J M Clark proposed three groups of objectives. As to the first group, there may be some question as to whether PSO would score as highly in terms of progress in economical methods of production, but it would seem to offer a more highly differentiated range of qualities and types of product, and the prospect of developing more new products. It is notable that Clark puts first these elements required for progress, as being most important. He also comments that “an amply differentiated range of qualities and types of any given product to choose from ... is of course wanted for its own sake; but in terms of progress it means that producers are exploring – and influencing – the customers' preferences and potential preferences, and products evolve in the directions these preferences indicate.” (pages 247-8) This is precisely what PSO aims to achieve.

In terms of Clark's second group of objectives, PSO would presumably offer diffusion of the benefits in terms of lower prices to the extent that customers preferred taking benefits in this way rather than in terms of, say, higher quality of service. PSO might not drive prices and profits down as quickly as standard price cap regulation, but it would seem to fit more closely with the concept of erosion *and recreation* of profits.

Clark's third group of objectives refer to conditions of competitive rivalry. This is not immediately relevant to an assumed monopoly situation, but nevertheless the criterion he proposes is of potential interest. Standard price cap regulation is essentially reliant on "efficiency and the diffusion of its benefits" as a result of "direct regulatory order" rather than "direct governmental order". An aim of PSO is indeed to replicate more closely than standard price cap regulation the operation of the competitive market, where "normal business motives impel businesses ... to conduct that will tend to further the desired results". ENERGEX envisages that under PSO "a different relationship would form amongst itself, the regulator, and customers. ENERGEX would strike a contract with customers to provide services at a certain, mutually agreed price, and the regulator would oversee and enforce the contract on behalf of customers." It will be important to ensure that the diffusion of the benefits of efficiency do not depend unduly on "the goodwill and arbitrary decision of private producers", for example in terms of the offered packages from which customers are to choose.

To summarise, PSO seems more in tune with Clark's own concept of the objectives of workable competition. It might not score as highly in terms of driving efficiency improvements and price and profit reductions, but it scores more highly in terms of the provision and development of a differentiated range of qualities and type of product related to the preferences of customers, and in terms of the erosion and recreation of profit. Putting less emphasis on reducing prices and profits is for Clark not a bad thing – it was precisely his criticism of the perfect competition model that it was "one-legged, focusing on the essentially static objective of price-cost equilibrium, to the neglect of the dynamic objectives of progress". In his view, the dynamic objectives of progress were most important over the longer term. Or, in more recent language, dynamic efficiency is more significant than allocative efficiency, and over the longer term is potentially more important than productive efficiency. Thus, to the extent that PSO has a broader perspective than the way in which standard price cap regulation has been implemented, it is closer to Clark's own concept of workable competition.

### **c) Economic thinking on competition as a process**

Standard price cap regulation was designed to overcome some of the perceived limitations of rate of return regulation by using Austrian ideas on the nature of competition as a discovery process. It recognised that neither the regulator nor the company knows all the things that might potentially be relevant for determining the most efficient methods of production in future. It also recognised that a price cap could provide greater incentive on the company to discover new ways of increasing efficiency. In due course, resetting the price cap could transfer a share of the resulting benefits to customers.

PSO, too, broadly embodies these incentive ideas. It envisages that a price cap will be set to provide incentives to the company, and to share benefits with customers. However, PSO goes further.

The above discussion assumes that the nature of the product is given. This overlooks another kind of difficulty with regulation in general, which applies to standard price cap regulation in particular. In normal competitive markets, customers make their own decisions about what goods and services to buy, including what qualities of product they want. In contrast, in the utility sector, the regulator typically has to make decisions on behalf of customers – for example, as to the desired quality of service, which in turn has implications for the type and extent of investment in the system. It is not straightforward to judge what level of service customers would prefer.

The problem is in fact more general than quality of service. For example, it includes what kind and duration of “contract” between customers and the regulated company is preferable. Should there be a fixed price or some element of cost pass-through – in other words, how should the risks of uncertain developments be shared between the company and the customers? Should the duration of the contract be one year or five years or fifteen years? What if any kinds of “re-openers” should there be?

PSO explicitly recognises the need to discover, not only what methods of production are the most efficient, but also what qualities and types of products customers prefer, and in principle what kind of contract they would like. In fact it goes still further. It recognises that different customers might prefer different services. It seeks to build into the control a better incentive to provide these preferred services.

It is for consideration how far such differential choice will prove possible to implement, given the technology of electricity distribution and the limitations of customer consultation processes. However, the aim is that customers themselves rather than the regulator should choose what services are provided, and in principle different customers might choose different services. In that sense PSO is closer than standard price cap regulation to this recent Austrian development of workable competition.

The Austrian view sees competition as a *rivalrous* process taking place *over time*. There are two aspects here. PSO certainly incorporates the idea of process over time. It seeks to provide a better incentive than standard price cap regulation insofar as it seeks to provide greater stability and assurance about outcomes, and less regulatory uncertainty. It is hoped that this in turn would provide greater incentive to innovate. How far PSO would achieve this presumably depends on how far ahead consumers are willing to commit themselves. It is possible that some would wish to commit for longer than the standard five year price control period, but it is also possible that some would prefer a shorter time period.

The other question is how far PSO embodies rivalry, which is seen as a protection for customers. There is a suggestion that the regulator could impose “broad supplementary requirements on ENERGEX, for example requiring ENERGEX to demonstrate that it was meeting appropriate industry benchmarks in the provision of distribution services”. Apart from this, however, there is no reference to other distribution companies and service providers, and no explicit mention of rivalry. PSO thus seems to have less emphasis on comparisons with other regulated companies, and thus less scope for rivalry, than would be expected in standard price cap regulation.

#### **d) Public choice and competition**

Limiting standard price cap regulation to monopoly networks, and exposing potentially competitive services to new entry and competition, recognises that effective competition is a better protection of customer interests than does regulation. This proposition is consistent not only with Austrian ideas about the limited knowledge available to the regulator, but also with public choice ideas about the pressures and incentives on a regulator.

Public choice considerations seem relevant in at least three further respects. First, media pressure and the interests of politicians, as well as those of investors, tend to focus on prices rather than quality of service. The regulator is under pressure to secure an acceptable “bottom line” for consumers. As noted above, there is some concern that this may have led or may in future lead to undue focus on price at the expense of quality of service.

Public choice considerations may also help to explain why it is typically difficult for a regulator to approve different services or different kinds of regulatory contracts for different regulated companies and for different customers. It is not easy for a regulator to justify treating companies and customers differently. One size has to fit all. This pressure towards uniformity is in contrast with what happens in the competitive market. Such uniformity seems likely to reduce innovation and the ability to learn from experience.

Third, however, customer representatives cannot be assumed to act in precisely the way that customers themselves would act (even if they knew precisely what this was). Surveys of customer preferences may help to provide information, but the customer representatives will take many of the decisions about PSO. There may well be concerns (discussed in the next section) as to what will motivate these representatives and how they will be chosen.

PSO thus seems more consistent with certain aspects of the theory of public choice. More precisely, PSO seems more capable of overcoming some of the obstacles identified by public choice theory to meeting customers' needs for quality as well as price, and the different needs of different companies and customers. Nevertheless, some questions still remain on this score.

#### **e) Transactions costs and competition**

The study of transactions costs is beginning to provide new insights into the nature of competition. It may be that some forms of regulation, despite their limitations, are more efficient or less costly ways of achieving the objectives of consumers in general, or of some groups of customers, or of other interest groups, than are alternative forms of contract negotiated in the market.

In the present context, a relevant question might be posed as follows. Is it easier and less costly for a regulator to discover the costs of the company and the preferences of customers, and to negotiate with the company, or for customer groups to do so? It might be argued that regulators typically have more and better information about the companies – but need this always be the case? Would it be possible to enable customer representatives to acquire similar information? Similarly, it might be argued that customer representatives would better know the preferences of customers generally – but again, how reliable is this knowledge, and could the regulator not carry out customer surveys? Finally, it might be argued that a regulator with defined legal powers would be a more effective negotiator than customer groups without such powers - but again, what if the customer groups were able to call on such regulatory powers and processes if necessary?

It is difficult to answer such questions without further research, but two points can perhaps be made. First, further steps would seem to be needed in order to reduce the transactions costs that would be incurred by customer groups if they are to attain a comparable level of knowledge and negotiating power as a regulator. The point is discussed again in the context of criterion 2, where it is pointed out that some acknowledgement needs to be made of transactions costs issues, and appropriate measures taken.

Second, however, there seems to be some empirical evidence, also discussed below, that negotiation between companies and customer groups can be effective in certain regulatory circumstances. It may well be, therefore, that in the appropriate conditions the process envisaged by PSO could lead to a more realistic representation of the competitive market process than would standard price cap regulation.

## **f) Conclusion on criterion 1**

The first criterion in the terms of reference is that of the consistency of PSO with developing thinking on competition. The Court envisaged that the relevant concept of competition for utility regulation would be workable competition, which it took to be continually updated with newer economic thinking.

PSO places greater weight on developments and innovations in quality and variety of products and services, and on discovering and meeting the needs of customers themselves, than does the conventional present approach to price cap regulation of utilities. It is potentially more consistent with the concept of workable competition.

By the same token, PSO is also more sympathetic to Austrian ideas of competition as a dynamic market discovery process. In particular, it recognises more explicitly that different customers may have different needs and preferences, and seeks to identify and respond to these.

PSO seems more capable of overcoming certain public choice type obstacles to the provision of differential services. However, the public choice incentives operating on the customer choice representatives should not be overlooked.

In the absence of other measures, PSO seems likely to have higher transactions costs of discovering the costs of companies and preferences of consumers, and of negotiating a satisfactory contract, than standard price cap regulation. However, the extent of this extra cost, if any, would seem to depend on the powers granted to the proposed representative customer groups.

This last point leads to a reservation about the ability of PSO, as presently formulated, to assess and ensure productive efficiency and appropriate levels of profit. Subject to that qualification, however, PSO seems broadly consistent with developing thinking on competition, in terms of the original concepts of workable competition and more recent Austrian and public choice developments. It is closer to workable competition and its recent developments than is standard price cap regulation, particularly in terms of discovery of, and response to, customer preferences in relation to quality of service dimensions.

## 7. Whether price-service offerings is practical, robust, and feasible as a method of regulating energy networks

It seems easiest to approach the second criterion in the terms of reference by asking what sorts of objections a regulator or others might see in PSO, in terms of practicality, robustness and feasibility, then considering how far such objections can be dealt with.

### **a) Scope for improvement**

One potential objection is that there may be little scope for improvement for customers as a result of the PSO process, or at least less than claimed, or at least if the regulator is taking appropriate note of what customers want. Questions might be raised, for example, about the precise content of the suggestions put forward by ENERGEX. Are the suggested options likely to be of interest to the majority of customers? Is there sufficient scope for differentiating three rather than two packages? Surely a regulator would plan to include the more significant options in a standard regulatory approach anyway?

Against this, I understand that ENERGEX has carried out some customer surveys whose results suggest that there is indeed scope for significant improvements that customers would welcome and for which they would be prepared to pay.

I am not in a position to evaluate the validity of these results. However, these and other questions are surely for the company and customers to deal with (provided that there is sufficient basis in the proposal to warrant going ahead with it).

It might be objected that a conscientious regulator should surely seek to bring this about under standard price cap regulation. A difficulty with such an argument is that a regulator has many things to be concerned about, and most public focus has hitherto been on “the bottom line” of prices and costs and profits. PSO would seek to move away from that - not ignoring prices and costs and profits, but putting them into perspective, with greater emphasis on these other issues just mentioned.

PSO could do this because it would directly involve customers and their representatives. The aim is for customers rather than the regulator to inform the company what sorts of goods and services they would like, then for customers to choose between packages of such services put together by the company in response to these suggestions.

Again, it might be argued that a regulator could take the advice of customers under standard price cap regulation. In practice, however, the regulator, not the customers or their representative groups, makes the final decision under standard price cap regulation. PSO would change this.

A further potential advantage of PSO is that there could be greater variety of response to customers’ preferences than standard price cap regulation allows. Customers of different companies, or in different regions, and ultimately with different preferences, could be given different terms of supply. This again is not impossible under standard price cap regulation, but it is very difficult for a regulator to justify treating one group differently from another, so in practice it would be unlikely to happen under standard price cap regulation.

In short, the potential advantages are that PSO could deliver terms of business closer to what customers themselves want. Bearing in mind all the variety of customers, this could well mean a greater variety of preferences than standard price cap regulation acknowledges or is able to accommodate. Note also that terms of business refers not only qualities and types of service, important though those are. It encompasses also the nature and duration of the regulatory contract – whether it should be a fixed price cap or a sharing basis or a cost pass-through, and whether it should last for one year, five years or ten years, and so on.

#### **b) Selection of customer representatives**

There might be concerns about the selection of customer groups and representatives. Who would properly represent customers? How to find and select these representatives? How to encourage the best representatives to participate? How to balance the interests of different types of customers? How to resolve differences of view as between them?

This is something that can only be resolved in detail in the light of experience. However, it seems likely that various customer groups would be keen to participate, since it would further the interests of their members. Experience in the UK is that the number and capability of such groups increased to meet the demand and role envisaged for them. Active participants in the regulatory process included several major energy user groups for large companies, local Chambers of Commerce for smaller commercial users, and Consumer Associations and various Poverty Groups for residential customers. These groups are in addition to the Electricity Consumer Committees appointed by the regulator in each distribution business area, and subsequently part of the independent but government-funded Energy Watch.

I understand that there has been similar experience in Alberta, Canada, where intervener groups approved by the Alberta Energy and Utilities Board have played an increasing role in determining the utility price controls. These groups have included the Consumers Association of Canada, the Alberta Association of Municipal Districts and Counties, the Rural Electrification Associations, the Industrial Power Consumers of Alberta, the Alberta Urban Municipal Authorities, representatives of public institutions such as hospitals and schools, and others. It seems that it has frequently been possible to get cooperation among the different groups, especially with respect to sharing workload in the assessment of total revenue requirements<sup>12</sup>. This has then led on to agreement between intervener groups and the regulated companies, and subsequent approval by the regulatory body without the need for lengthy and costly hearings.<sup>13</sup>

Funding for interveners as approved by the Board has presumably facilitated participation in this process, though it is sometimes alleged to constitute a “cottage industry”. The PSO process could make a similar provision for contribution to the reasonable expenses of consumer groups,

---

<sup>12</sup> There might be different views on the attribution of costs and revenues in the design of tariffs, and this stage is typically taken separately and perhaps left to the regulator.

<sup>13</sup> I understand this has also happened in certain US jurisdictions, though typically for routine issues and within established guidelines - for example, as to the nature of costs to be allowed in a price control hearing.

---

community groups and local councils, and other representatives as the PSO attachment suggests.

### **c) Information and bargaining power**

A third concern, perhaps the most challenging one, is that customers would not be sufficiently informed to protect their own interests. They could thereby lose some important protections provided by the present or standard approach to regulation, with respect to price and perhaps efficiency too. Put crudely, the argument might go as follows: Under PSO, the company would put forward packages of improved services that customers might prefer. However, these packages would embody additional charges that would be significantly higher than the additional costs involved. Customer groups would not be well placed to detect or resist this. In practice, decisions would be made by the company rather than by customers.

A first response might be that the description of PSO provides that “the current price-service situation would provide the base case from which the customers could choose to move to higher price-service points or remain at the existing price-service point. Thus a change would only come about due to the decisions of customers.” Insofar as the current price-service situation reflects the recent price cap, this would embody a degree of standard regulatory protection. Customers could decide not to move from there unless the prospective benefits to them outweighed the prospective additional charges.

Nevertheless, this may not be entirely reassuring, for two reasons. First, it provides no guarantee that the additional charge is a fair reflection of the additional cost involved. Experience suggests that utility customers are sensitive to this equity point.

Second, the argument carries less conviction as time elapses. It provides no guarantee that the price of the basic option will subsequently move in line with the costs of providing that option. Experience has shown that price caps have provided very strong incentives to reduce costs over a significant period of time, more than could plausibly have been expected beforehand.

To overcome this difficulty, it seems to me that customers or their representatives need certain additional protections. Four possibilities spring to mind.

#### 1) Access to information

First, consumers and their representatives need access to relevant information and advice – the sort of information and advice that the regulator would normally expect to obtain. This would enable them to form an opinion as to whether the options they were being offered were reasonably priced, and could be recommended to their members and to other consumers. This would mean that the company would have an obligation to provide the kind of information that it was obliged to provide to the regulator – typically about costs incurred in the past and about projected costs for the future. The customer groups could similarly hire consultants to advise them, on the understanding that the costs of these would be recovered from customers they represent via the price control.

#### 2) Competitive rivalry by comparison

In a normal competitive market, customers can compare the offering of rival companies. It would be for consideration how far customer groups dealing with different companies should be able to compare and contrast the information that they obtained. However, there would seem to be an

advantage in facilitating this. It would help customers in one distribution area to know that a company in another area had proposed better quality of service, or on better terms, than its own company was offering. As now, the fact that one company has achieved a certain level of cost, or proposes to in future, would not be the last word on any subject. Rather, it would be the starting point for an informed discussion as to what sort of packages it would be reasonable for each company to offer and on what terms.

### 3) Alternative provision

Commercial contracts often provide that the buyer of services be allowed to employ another contractor to provide certain services if agreement cannot be reached on the price (although in practice both sides generally prefer to avoid the need for this). In a similar spirit, it might be possible for another party to provide some of the additional service improvements if the host distribution company is unable or unwilling to provide these, or not at an acceptable price. This would introduce a further and more direct possibility of rivalry that is so far missing from the PSO proposal, as compared with the concept of workable competition and its Austrian interpretations. How far that would in fact be possible in an electricity distribution business would need further consideration. However, it should, for example, be possible to get alternative quotations to install capital equipment to reinforce or underground the network – indeed, the company itself might well choose to put such work out to tender.

### 4) Backstop provisions

Fourthly, there would be advantage in avoiding vulnerability to the possibility of a “take it or leave it” threat under PSO. Suppose that the company put forward several packages or options, none of which was attractive to customers. Or suppose that there were options that the customers would like, but that the company was unwilling to offer on terms that the customers considered reasonable. The present implication is that the company would be the ultimate determinant of the choice that is offered to customers, and that the latter could only choose between what the company offered. An alternative formulation that would give more power to customers would be for the regulator to have the reserve power to make and enforce proposals in the event that customers and the company were unable to agree. This would help to ensure that both sides negotiated in a responsible way.

### **d) Cost allocation and relative prices**

The regulator might have concerns that some customer groups would have more influence or bargaining power than others, or that the company might wish to favour certain customer groups or certain services. There might be concern if one group were in effect subsidising another – or, for that matter, if PSO were to preclude or undermine an established and accepted policy of cross-subsidisation.

In order to protect all customers without favour, the regulator may need to ensure that all customer groups are adequately informed and advised. Transparency of discussions and their implications may be a key here.

Another potential cause of concern would be if the company supplying the distribution business services were also one of several competitors or potential competitors in the retail supply business. It would be undesirable, for example, if a distribution company could promise better distribution business service as a quid pro quo for getting a customer’s retail supply business.

Another concern would be if a distribution business were to be remunerated for certain services under the price control that might preclude those services being provided competitively

In order to promote effective competition and choice, the monopoly and competitive parts of the sector need to be kept quite separate. The benefit of network improvements should be equally available to customers whatever their choice of retail supplier, and the network price control should not subsidise or preclude the development of potentially competitive activities.

These problems do not seem insuperable. Guidance from the regulator may suffice, or a reserve regulatory power to check and modify the details of a proposed rate structure.

#### **f) Conclusion on criterion 2**

The second criterion in the terms of reference concerns the practicality, robustness and feasibility of PSO.

One concern might relate to the substance and appeal of the options envisaged, and the scope for significant improvement for customers. Ultimately these would be matters for customers themselves to judge. If significant improvements are indeed feasible, PSO seems more likely to discover and bring about the kinds of improvements that customers themselves would prefer.

A second concern might relate to the selection of customer representatives, and whether it would be feasible to get adequate representation. Experience in the UK and Alberta and elsewhere suggests that representative groups are indeed keen to participate. This may be facilitated by financial support approved by the regulator.

A third and major concern might be that customers would not be adequately protected against the monopoly power of the incumbent regulated company. As a result, although customers might get a better deal in some respects, the deal would not be as good as it should be. This concern could be met in a number of ways, including by giving the customer groups powers to obtain relevant information from the company, and to hire professional advice; by enabling a degree of competition by comparison or by direct provision; and by giving (or leaving) the regulator a backstop power to determine the terms in the event that customer groups and the company were unable to agree.

There might be concerns about cost allocation and about relative prices favouring some customer groups or some companies including the incumbent. Enabling adequate information and funding for each group, and providing appropriate regulatory guidance and monitoring, could meet these concerns.

On this basis it seems to me that PSO could be adapted to be a practical, robust and feasible method of regulating energy networks.

---

## 8. Overall conclusions

I have examined the Price-service Offering concept against the two criteria specified in the terms of reference. Detailed conclusions to the previous two sections set out the basis for my views against these two criteria. In this final section I should like to put the issue into broader context.

Standard price cap regulation has increasingly tended to supplant traditional rate of return regulation in the utility sector, and has undoubted achievements to its credit. Coupled with the introduction of competition where feasible, it has led to the discovery and elimination of significant inefficiencies in operating costs throughout the utility sector. This in turn has led, over time and not without some hiccups and exceptions, to generally lower prices in real terms. It has also led, in the UK at least, to higher rather than lower capital investment in the networks, and to higher quality of service. These advantages of standard price cap regulation should not be lightly put aside.

There are, however, concerns that the scope for such reductions in operating costs is now or is being exhausted, that the tightness or uncertainty of the price caps is or may be a disincentive to further new investment, that there are or may be threats to the continued participation of equity investors in the utility sector, and that this in turn may threaten continued innovation in new products and processes.

It is debateable whether these concerns are all as severe as some would argue. Nevertheless, there is surely scope for improvement and, given the concerns, it is particularly opportune to examine alternative or complementary methods of regulating utility networks. It may be possible to develop methods that retain many of the advantages of the present approaches while overcoming some of their limitations.

Price-service offerings as proposed by ENERGEX has a number of attractive features. It retains to incentive concept of a price cap, puts greater emphasis on quality and innovation, and not simply on cost and price. It attempts to discover and provide what customers themselves prefer. It recognises that different customers will in general have different preferences, and indeed that different companies may have different abilities to provide different services. It includes the concept of choice. It recognises, too, the need to see regulation as a process taking place over time, and to provide long-term incentives to discover and to innovate. These incentives include the form and nature of the contractual agreement between customers and the regulated utility network. Price-service offerings seems to embody a greater possibility of meeting all these different objectives. If successful, it could lead to greater diversity of outcomes, each more successfully meeting the objectives of those involved. Such diversity could, in turn, yield more scope for learning and benefiting from experience than the present system offers.

There must be some question how far there is scope for significant improvement in practice. How substantial are the kinds of quality improvements, individual choice of quality, and innovation in products and processes, that price-service offerings envisages? This remains to be discovered, and a benefit of PSO is that it would help in this process. It would be unwise to discount the importance of innovation and discovering and responding to customer preferences.

Some might worry that customer representatives would be unwilling to step forward. Experience in the UK and Alberta and elsewhere suggests that this should not be a concern. Many customer groups already participate, and financial support for their reasonable expenses would facilitate this further.

---

The main reservation that I have is whether the postulated mechanism would adequately balance the interests and powers and abilities of the company as opposed to those of the customer groups with whom it would negotiate. As presently envisaged, the latter play an important but relatively passive role. Access to relevant information and bargaining power will be of key importance if they are to play a more active role. If the customer groups lack either of these factors, there is at least a danger that the improved sensitivity to their quality preferences could to some extent be at the expense of prices, profits, efficiency and costs. Admittedly it may be argued that the Court envisaged the possibility and indeed desirability of something of this kind. The issue is therefore one of degree and balance.

To remedy this concern, I have suggested that the proposed price-service offerings scheme should be complemented by provisions for giving customer groups access to relevant information comparable to that presently obtainable by regulators. There might be greater ability to enable rivalrous competition by comparison or where possible by direct competition. In the event of failure to agree terms, the regulator should stand ready to propose a solution. The presence of this regulatory backstop should enable and incentivise both sets of parties – companies and customer groups – to play an active and constructive role in the negotiation of contractual arrangements to their mutual benefit, without the need to have recourse to that backstop.

With these qualifications, I conclude that price-service offerings substantially accords with developing thinking on the nature of competition, and could be practical, robust and feasible as a method of regulating energy networks. It deserves very serious consideration.



---

## Appendix 1 Author's qualifications

PROFESSOR STEPHEN C LITTLECHILD B Com, Ph. D., D.Sc. (Hon)

Honorary Professor, University of Birmingham Business School, since 1994  
Principal Research Fellow, Judge Institute of Management Studies, University of Cambridge, since 2000.

### Previous positions:

Professor of Commerce and Head of Department of Industrial Economics and Business Studies, Univ of Birmingham 1975-1989.

Visiting Professor Stanford, New York and Chicago Universities 1979/80.

Member of Monopolies and Mergers Commission 1983-9.

Report to Secretary of State proposed RPI-X approach to price controls 1983.

Advised UK ministers on the regulatory regimes for privatised utilities including telecommunications, water and electricity, 1983-89

Director General of Electricity Supply (DGES) and Head of Office of Electricity Regulation (OFFER) 1989-98.

### Present work

Policy advisor to governments and companies internationally since January 1999, including in Mexico, Philippines, India, Australia, New Zealand, Thailand, Brazil, Poland, Romania, Japan, South Africa, Saudi Arabia, Ireland and elsewhere.

Expert advisor to Government Inquiry into New Zealand electricity industry, 2000.

Member of Ofwat Common Carriage Consultative Working Group, 2000.

Member of Ofgem Panel of Economic Advisers since 2001.

### Recent experience in Australia:

1999 Office of Regulator General, Victoria: advice on UK regulation and price controls

2001 TXU Australia: expert witness in judicial review of price controls in Victoria

2002 Murraylink: expert witness in Tribunal appeal on merchant transmission

### Recent reports and research:

Privatisation, Competition and Regulation, The 29<sup>th</sup> Wincott Memorial Lecture, delivered at Church House, Westminster, 14 October 1999, published as Institute of Economic Affairs Occasional Paper 110, February 2000.

Electricity: Regulatory Developments Around the World, (Beesley Lecture, IEA/LBS, London, 9 October 2001, revised version 3 February 2002), London: Institute of Economic Affairs (forthcoming).

Privatisation, Competition and Regulation: Some Austrian Reflections, (Ludwig Lachmann Memorial Lecture, Johannesburg, 19 September 2001), The South African Journal of Economics, Vol. 69, No. 4, December 2001.



---

Regulators, Competition and Transitional Price Controls: A critique of price restraints in electricity supply and mobile telephones, Institute of Economic Affairs Occasional Paper, [www.iea.org.uk](http://www.iea.org.uk) 19 February 2002.

Hydro One Transmission and Distribution: Should They Remain Combined or be Separated? (with Adonis Yatchew), Report to the Electricity Distributors Association, Toronto, Ontario, 6 May 2002.

Competition in Retail Electricity Supply, Journal des Economistes et des Etudes Humaines, Volume 12, n°2/3, July-September 2002 (forthcoming), pp. 353-376.

Is it worth the risk? (with Tony Jackson), Utility Week, 26 July 2002, pp. 16-17

Electricity Retailing and Wholesale Spot Price Pass-Through, in Journal of Regulatory Economics, vol 23, no 1, January 2003, pp. 59-89 (forthcoming)

Other honours:

May 1999, Zale Award for Scholarship and Public Service, Stanford University

Oct 2000, PACE Catalyst Award for outstanding accomplishments in regulatory reform

July 2001, Honorary Doctor of Science degree, Birmingham University

---

## Appendix 2 Price-service offerings: Summary by ENERGEX

ENERGEX advocates price-service offerings as a mechanism for recreating the customer choices and other conditions that prevail in workably competitive markets. Price-service offerings focus on providing the services that customers require at efficient prices. For utilities, price-service offerings provide the most appropriate regulatory regime to provide a sustainable basis for development and enhanced incentives for efficiency. The price-service offering regime also conforms in all respects with the objectives of the Australian legal framework for electricity and gas regulation.

### 8. Three options

Price-service regulation allows ENERGEX to offer a range of packages of services to customers – each with differing service standards and associated tariffs. At this stage, ENERGEX intends to offer the packages as mutually exclusive options for most customers. Over time, ENERGEX will develop more tailored packages to offer to groups of customers or individual customers as differentiated service delivery systems are further developed.

ENERGEX intends to offer three broad price-service offerings to most customers in the next regulatory period:

- a base case option;
- a customer value option; and
- a customer premium option.

The base case option would meet ENERGEX's minimum obligations with respect to the supply of electricity. The customer value and customer premium options would be offered as packages with enhanced service offerings. Rewards and penalties would be associated with meeting or failing to meet particular targets. These packages would incorporate views expressed by customers during consultations. Some other differentiated packages will be offered to certain large customers, certain locations, and certain types of customers (eg hospitals). These are not discussed here.

### 9. Base Case Option

The base case option would be a minimum cost alternative which, if adopted, would mean that ENERGEX would maintain current service levels, reliability and safety standards and meet increasing energy demand and new customer growth.

### 10. Customer Value and Customer Premium Options

The customer value and customer premium options would offer additional and higher quality services as determined by surveys of customers and consultations with representative community groups.

---

## 11. Choice of Regulatory Regime

ENERGEX is concerned about the possibility of ongoing application of a cost based regime. A cost based regime focuses, at a detailed level, on determining the cost of delivering a base level of service with the single incentive of constraining costs. This means that the regime is not focussed on outcomes such as meeting customer demand for particular reliability levels. A cost based regime also creates a degree of uncertainty about the future of the regulatory process and hence investor confidence. This type of regime is not well-suited to adjusting to changing customer demands, or providing a secure basis for future investment. Such an approach may also be incorrect under the law following a recent Supreme Court decision.

ENERGEX believes strongly that an incentive based regulatory regime will provide an environment where ENERGEX is motivated to achieve both improvements in service levels (as required by our customers) and price. The service level improvements will be achieved by ENERGEX having the confidence to invest in the necessary infrastructure improvements and the price will be maintained at an agreed rate, providing ENERGEX the revenue to pay for the investment over time.

## 12. Specific Offerings under Customer Value and Customer Premium Options

ENERGEX's customer value and customer premium offerings will offer improvements to services in at least the following seven areas:

Safety (in the home and on the street);  
Undergrounding (fund established to underground key elements of the network);  
Environment (distribution losses, greenfleet, reduced network environmental impact);  
Reliability (less and shorter interruptions, better power quality);  
Hardship (fund to assist those in hardship);  
Regional Development (fund to improve reliability outside Brisbane metro area); and  
Customer Service (expansion of guaranteed service level commitments)

The customer value option would offer improvements on current standards of service across these areas, while the customer premium option would reflect even greater improvements in standards of service.

## 13. Customer Relationships under Price-Service Offerings

At present, the regulator effectively sets service standards through its decisions in relation to the revenue requirements of electricity distributors. Customers are not involved in this process.

ENERGEX envisages that under price-service offerings, a different relationship would form among itself, the regulator, and customers. ENERGEX would strike a contract with customers to provide services at a certain, mutually agreed price, and the regulator would oversee and enforce the contract on behalf of customers.

---

## **14. Regulatory Arrangements to ensure Value for Money and Protect Customer Rights**

Price-service offerings would represent a form of weighted average price cap arrangement. The cap would be set according to customer willingness to pay rather than on a cost basis. This cap would specify average tariffs at the start of the regulatory period, and specify the price path for tariffs over each subsequent year of the regulatory period. ENERGEX would stand to receive rewards if it bettered specified service standard targets, or to be penalised if it failed to meet these targets.

There are a number of additional mechanisms built in to price-service offerings to ensure customer rights are protected, and in particular to ensure customers receive better value for money than they would under cost based regulation.

First, the current price-service situation would provide the base case from which customers could choose to move to higher price-service points or remain at the existing price-service point. Thus a change would only come about due to the decision of customers. Secondly, if ENERGEX failed to meet agreed service standards under either the customer value or customer premium option, the regulator could enforce penalties specified in the contract. The agreed service standards would be underpinned by a distribution service charter and a set of performance measures. Thirdly, the regulator could further protect customers by imposing broad supplementary requirements on ENERGEX, for example requiring ENERGEX to demonstrate that it was meeting appropriate industry benchmarks in the provision of distribution services. Fourthly, the regulator could accept independent market research from ENERGEX or commission its own to verify the willingness of customers to accept a chosen option such as the customer value option over the base case option. This research could be tested against the views of community groups. Fifthly, the price-service offering could be registered as an undertaking under the Trade Practices Act, Part IIIA. This would provide the enforcement rights available under Part IIIA.

## **15. Consultation**

ENERGEX is committed to a process of full consultation with customers in further developing and refining its price-service offerings. It proposes to continue to survey customers to better understand their needs, and to develop price-service offerings in consultation with a range of community groups, local Councils, and specific customers. We have invited the regulator to participate in these processes.

## **16. Conclusion**

Price-service offerings provide the opportunity for customers to direct ENERGEX in developing the sorts of services they require. ENERGEX believes that a regulatory regime that creates an environment in which utilities are induced and driven to achieve continuous improvement is essential, and will result in greater satisfaction of customer demand.

### **Appendix 3 Development of modern utility regulation**

Utility regulation developed on a fairly systematic basis in the USA during the course of the nineteenth century, although other forms of regulation of utility industries were implemented in the UK and elsewhere during this and earlier periods. The general aim was to protect users against the “natural monopoly” characteristics of the utility, by ensuring reasonable rates rather than excessive prices or profits, while providing adequate incentives for the continued provision of desired services. The usual form of US utility regulation was based on allowing just and reasonable operating costs plus a reasonable rate of return on prudent investment.

From the 1960s onwards, there were criticisms of this approach to regulation, reflecting amongst other things the developments in economic thinking discussed below. These criticisms included the possible inadequate incentives to efficiency of a “cost-plus” regime, possible distortions in capital expenditure and in rate structures, the cost and time of regulatory proceedings, the degree to which the regulator became involved in detailed decision-making, the possibility of “regulatory capture” by the regulated industry, the barriers to entry imposed by regulation and/or government, the perceived excessive prices and costs, and so on.

Similar criticisms were made where public bodies were used to supply utility services, as for example the nationalised industries did in the UK. There were also concerns about government ownership per se. When the UK decided to privatise these utilities, starting in the 1980s, it was considered necessary to introduce some kind of regulation for them. However, one of the aims was to find a means of regulation that had fewer of the perceived drawbacks of the US approach.

The approach adopted was two-fold. First, there was the allowance and indeed encouragement of competition in those areas where this seemed possible. Some activities of the utility could be expected to remain as a monopoly, but not all need be. To this end, statutory barriers to entry were removed or reduced, and the industry was often restructured into smaller entities with a view to facilitating competition between them.

Second, a form of incentive regulation subsequently known as RPI-X or Price-cap regulation was introduced. RPI here stands for the Retail Price Index, which is the generally used measure of inflation in the UK. (In Australia and elsewhere the term CPI is used for the Consumer Price Index.) X is a number specified initially by the Government, at the time of privatising the company, and later revised by the relevant regulator. This price cap often initially applied to the whole product or service, but the intention was that it be limited to the core monopoly sectors, with prices, profits and quality of services in other sectors being increasingly determined by competition.

The underlying idea of the price cap regulation is that the company has to reduce prices in real terms by X per cent per year, for the specified duration of the control. X would be set with a view to the company’s likely or possible costs, assuming it operated increasingly efficiently, and would assure customers that they would be better off as a result of privatisation. However, the company could keep any cost reductions beyond the specified level, again for the duration of the control. This was intended to provide protection for investors against inflation, plus an incentive to investors to increase efficiency and increase and meet demand, including by improving service quality and by innovating.

This approach proved successful and was widely adopted in the UK and elsewhere, including in Australia. It has also begun to supplant traditional rate of return approaches in many US jurisdictions. The record in the UK over the last decade or two is of broadly reduced prices,



---

improved quality of service, and increased efficiency in the privatised sectors governed by a mixture of competition and price cap regulation. These sectors include telecommunications, gas, airports, electricity, water and (until recent difficulties) rail. There is also evidence of good performance in the USA and elsewhere.

However, there have also been difficulties and criticisms associated with this form of regulation. In the early days these included concerns about high prices, profits and share options, and a feeling that customers were not getting a fair share of the benefits of privatisation and increased efficiency. Later developments in competition and tightening of the price controls increasingly dealt with these concerns.

Indeed, a more recent concern is the opposite: a concern that the latest price caps may have been set too tightly, so as to discourage adequate investment, potentially to impair quality of supply or innovation, and to discourage equity investors. For example, in the UK the National Audit Office, while commending the efficiency gains from privatisation, competition and incentive regulation, expressed concerns about possible risks of this form of regulation, along the lines just noted.<sup>14</sup>

How far each of these criticisms is valid is a matter of debate. Some of them may be overstated: the UK form of regulation has on the whole stood up well and delivered good results, certainly compared to the known and familiar alternatives. Nevertheless it is fair to say that there is still a variety of concerns. These include increasing concerns about possible adverse effects of “too heavy-handed” regulation on the regulated companies, and in the longer term on service and innovation and hence on customers. Not least concerned have been investors themselves. For example, there has been something of an attempted exodus of equity shareholding from the UK water industry, with firms seeking to reduce or even replace equity by largely or wholly debt-financed vehicles.

---

<sup>14</sup> National Audit Office, *Pipes and Wires*, HC 723 Session 2001-2, 10 April 2002.

## 17. Appendix 4 The Supreme Court decision

On 23 August 2002 the Supreme Court of Western Australia (henceforth the Court) gave judgement on the Epic Energy case. Although the case involved a gas pipeline company, the nature of this judgement seems to have implications for the nature of regulation of electricity distribution in Queensland. It also has implications for the present evaluation of price-service offerings insofar as it referred to developing notions of the concept of competition, and its conclusions will have implications for what is now feasible as a method of regulation.

The Court had to decide on the interpretation of the provisions of the National Third Party Access Code for Natural Gas Pipelines (the Code). Section 8 of the Code, headed Reference Tariff Principles, says that the Tariff should be designed with a view to, inter alia,

- 8.1 “a) providing the Service Provider with the opportunity to earn a stream of revenue that recovers the efficient costs of delivering the Reference Service over the expected life of the assets used in delivering that Service;
- b) replicating the outcome of a competitive market; ... [and]
- d) not distorting investment decisions ...”

### a) Meaning of efficiency

The Court decided that, in this context, “a reference to efficiency may well be a reference to economic efficiency” (page 53). It held that, “according to the theory of economic efficiency, the concept of efficiency has at least three well recognised dimensions. These are, productive efficiency, allocative efficiency and dynamic efficiency”. (page 53)

In its discussion of these concepts, and elsewhere, the Court made frequent reference to the Hilmer Report<sup>15</sup>. This Report defined these concepts as follows.

“Efficiency is a fundamental objective of competition policy because of the role it plays in enhancing community welfare. There are three components of economic efficiency:

- Technical or productive efficiency, which is achieved where individual firms produce the goods and services that they offer to consumers at least cost. Competition can enhance technical efficiency by, for example, stimulating improvements in managerial performance, work practices, and the use of material inputs.
- Allocative efficiency is achieved where resources used to produce a set of goods or services are allocated to their highest valued uses (ie. those that provide the greatest benefit relative to costs). Competition tends to increase allocative efficiency, because firms that can use particular resources more productively can afford to bid those resources away from firms that cannot achieve the same level of returns.
- Dynamic efficiency reflects the need for industries to make timely changes to technology and products in response to changes in consumer tastes and in productive opportunities. Competition in markets for goods and services provides incentives to undertake research

---

<sup>15</sup> Hilmer Report 1993 (Independent Committee of Inquiry into Competition Policy in Australia), *National Competition Policy: Report by the Independent Committee of Inquiry into Competition Policy in Australia*, AGPS, Canberra.

and development, effect innovation in product design, reform management structures and strategies and create new products and production processes.” (cited page 43)

b) Replicating the outcome of a competitive market

The Court noted the accepted relationship between economic efficiency and competition in a market, with the latter assumed to lead to the former and indeed a goal of economic regulation being as far as possible to replicate the efficiency outcomes that could otherwise be expected from the existence of effective competition. The Court went on to consider the meaning of the term competitive market.

“The expert evidence before the Court identified four distinct notions or usages of competition – free competition, perfect competition, contestability and workable competition. Of these, only perfect competition and workable competition are said to be in current economic usage. Perfect competition is a concept said to be still used in economic analysis, but it is a theoretical concept which is not met in the actual conditions of competition in any industry. Workable competition is said originally to have been developed over half a century ago by anti-trust economists. In simple terms it indicates a market in which no firm has a substantial degree of market power. While the evidence of the three witnesses differed in some respects, I am left with the clear impression that in the field of competition policy, especially market regulation, the prevailing view and usage among economists is that a reference to a competitive market is to a workably competitive market. In the particular context of the promotion of a competitive market for natural gas it would be surprising if what was contemplated was a theoretical concept of perfect competition, as the subject matter involves very real-life commercial situations. Workable competition seems far more obviously to be what is contemplated.” (page 58)

“It is my conclusion that in the preamble to the Act and the introduction to the Code the concept of a “competitive market” is that which economists in this field would understand to be a workably competitive market. That having been said, however, it is clear from the evidence that there is a division among economists as to how the concept is promoted where it does not exist, and how its outcomes can be artificially created in a monopolistic situation. A fundamental reason for this is that a workably competitive market is itself a variable and varying state of things – or rather it is a process. The evidence and the many supporting documents placed before us suggest that this is a field of very active endeavour by economists, with older views being constantly further developed and new views emerging.” (page 59)

The Court noted that monopoly was the absence of competition and that Covered Pipelines, the subject of the Code and the Act, are natural monopolies. It noted that s. 8.1 (b) of the Code required replicating the outcome of a competitive market, and commented “The objective seems to necessitate the application of economic methods and theory, albeit to replicate the outcome of a workably competitive market, because the achievement of competition in fact is not possible.” (page 59) It said that exploring the implications of this was primarily the task of the Regulator, but continued:

“It is of some relevance to notice, however, that as a competitive market, in this sense of an economist’s understanding of a workably competitive market, is not a fixed and immutable condition with any absolute or precise qualities, but a process which involves rivalrous market behaviour: *Re Queensland Cooperative Milling Association Limited*. As such, a workably competitive market will react over time and according to the nature and degree of various forces that are happening within the market. There may well be a

degree of tolerance of changing pressures or unusual circumstances before there is a market reaction. The expert evidence and writings tendered in evidence suggest that a workably competitive market may well tolerate a degree of market power, even over a prolonged period. The underlying theory and expectation of economists, however, is that with workable competition market forces will increase efficiency beyond that which could be achieved in a non-competitive market, although not necessarily achieving theoretically ideal efficiency.” (page 60)

c) The meaning of efficient costs

The Court next considered the meaning of the term “efficient costs”.

“...the word ‘efficient’ in a code dealing with the regulation of infrastructure in the context of competition policy reform and in which the concept of ‘economic efficiency’ has been expressly incorporated, strongly suggests a usage which comprehends and reflects that notion in its accepted senses of technical or productive, allocative and dynamic efficiency.” (pages 64-5)

The Court rejected the view that the phrase “providing ... the opportunity to earn a stream of revenue that recovers the efficient costs ... over the expected life of the assets” meant “no more than the efficient costs”. Neither did it mean “at least the efficient costs”. (page 65)

d) Balancing objectives

The Court noted that, because of the close relationship between the role of a competitive market and the achievement of economic efficiency, sections 8.1 (a) and (b) “are more complementary than antithetical, although they need not always be in harmony.” It said that “how best to determine the efficient level of costs or the outcome of a competitive market are matters of economic theory and practice which, on the evidence, are in the course of constant revision, development and refinement.” (pages 65-6)

In one of several approving references to the Hilmer Report, the Court recognised that economic theory offered no clear answer as to how to balance many competing considerations, including how to achieve the most appropriate balance between the interests of customers and the service provider. It commented, however, that

“the expert evidence, including the supportive expert writings, suggested a growing awareness of the long term disadvantages of striking the balance with too great an emphasis on the interest of consumers in securing lower prices, and without due regard to the interest of the service provider in recovering both higher prices and its investment.” (page 66)

e) Not distorting investment decisions

The Court discussed the meaning of not distorting investment decisions in 8.1 (d) and concluded that it would not be met simply by meeting the efficient cost recovery condition in 8.1 (a), or by confining the amount recovered to the replacement cost of the pipeline.

“To do so, fails to recognise that a reference tariff which is based only on a cheaper present replacement value, and which has no regard to the actual unrecovered capital investment in the pipeline, may well undermine the viability of the earlier investment decision. If future investment in significant infrastructure, such as a natural gas pipeline, is to be maintained and encouraged, as the public interest requires, regard seems to be required to the need for both existing and potential investors to have confidence that the very substantial long term investment decisions which are required, and which were

sound when judged by the commercial circumstances existing at the time of the investment, are not rendered loss-making, or do not result in liquidation, by virtue of future governmental intervention.” (page 67)

The Court went on to note an apparent unresolved tension between two views in this area. On the one hand, there was a view that economic efficiency required that actual past investment decisions be ignored, which might lead to some service providers “vacating the market”, but they would be replaced by others. Against that view was “a growing awareness that such an outcome, although offering the advantage of lower prices for consumers in the short term, could be contrary to public interest in the long term, because of the adverse effect on necessary future investment in such assets of any adverse outcome of past investments”.(page 68)

The Court commented “In my view, however, s 8.1 (d) has dealt with the issue expressly, and has done so by not denying the potential relevance of past investment decisions to the design of a reference tariff or a reference tariff policy.”(page 68) Consistent with this, the Regulator could, in an appropriate case, take into account the actual investment of the owner of a pipeline. “This is not to suggest that reckless, mistaken or highly speculative investment decisions should be accepted for this purpose.”

On this basis, the Court considered that an outcome of an investment decision that anticipated some monopoly profits would not be irrelevant to the Regulator’s decisions. At the same time, the Court acknowledged the Regulator’s concern. “Future investment in pipelines might well be distorted were it the case that *any* price paid by a service provider to acquire a pipeline, no matter how uncommercial, mistaken or reckless, should automatically be recognised as the initial Capital Base or value of the pipeline for the purposes of the Code.” It followed that a price paid would need to be carefully evaluated by the Regulator.

## 18. Appendix 5 Developing thinking on the nature of competition

In its discussion of competition and competitive markets, the Court explicitly referred to the concepts of perfect competition and workable competition. As noted, for purposes of regulatory tariff setting it rejected the former in favour of the latter. It also commented that “The evidence and the many supporting documents placed before us suggest that this is a field of very active endeavour by economists, with older views being constantly further developed and new views emerging.” (page 59) A few pages later it referred again to this notion of developing thinking. “... how best to determine the efficient level of costs or the outcome of a competitive market are matters of economic theory and practice which, on the evidence, are in the course of constant revision, development and refinement.” (pages 65-6)

This appendix summarises the concepts of perfect competition and workable competition, and indicates some of the subsequent developments in thinking on the nature of competition.

### 18.1 Perfect competition

Perfect competition is a relatively well-defined and familiar concept of economic analysis. The best-known feature is probably the assumption of many buyers and many sellers, which precludes either side of the market from exercising market power. For present purposes, however, another feature is key: the assumption of perfect knowledge. This means, amongst other things, that all sellers know and adopt the most efficient means of production, and that all buyers and sellers are aware of all the available goods and services and at what prices they are selling. These prices are equilibrium prices: there is no trade out of equilibrium.

The perfect knowledge assumption has important implications for the concepts of efficiency and efficient costs to which the Court refers.

Perfect competition meets the first type of efficiency – productive efficiency – by assumption. As just noted, perfect knowledge means that no firm will use productively inefficient techniques. There is no scope to stimulate improved managerial performance or work practices or use of material inputs.

That perfect competition meets the second type of efficiency is embodied in what is sometimes called the First or Fundamental Theorem of Welfare Economics<sup>16</sup>. This says that a perfectly competitive equilibrium will be Pareto efficient – that is, it will not be possible to reallocate resources to make anyone better off without making someone else worse off. Again, this result depends crucially on perfect knowledge: if firms were unaware of resource prices and values elsewhere, they would not bid high value resources away from low value uses.

The third concept of efficiency – dynamic efficiency – is essentially non-existent in the static world of perfect competition. The latter is a world of perfect knowledge and equilibrium, in which

---

<sup>16</sup> I assume that the witness Professor Williams had this in mind in referring to what the Court called “the first fundamental law of regulatory economics”. (page 54)

there are no changes in consumer tastes or productive opportunities. There are no incentives to engage in R&D, innovate in product design, reform management structures or create new products and processes, simply because there are no possibilities of such novel outcomes in the perfect competition model.

The welfare economic analysis of perfect competition went on to identify departures from perfect competition as “market failures”. The implication was that government remedial action of one kind or another was necessary – and sufficient - in order to achieve the efficient outcome that perfect competition would have delivered. For example, this might take the form of competition policy to deal with few sellers or anti-competitive practices, or regulation to deal with natural monopoly. In order to replicate the allocative efficiency of the perfectly competitive market, one of the prime tasks of the regulatory agency would be to ensure that price of each product equalled marginal cost.

## **18.2 Workable competition**

The Court contrasts with perfect competition the concept of workable competition, which it rightly suggests was developed over a half a century ago.<sup>17</sup> The originator of the latter concept, Professor J M Clark, argued that perfect competition “does not and cannot exist and has presumably never existed” and that the competitive model of theory affords no reliable standard for judging real-world competition.<sup>18</sup>

Many authors proposed definitions of workable competition. Scherer outlines “some criteria of workability suggested especially frequently by diverse writers”.

### Structural norms:

- 1 The number of traders should be at least as large as scale economies permit.
- 2 There should be no artificial inhibitions on mobility and entry.
- 3 There should be moderate and price-sensitive quality differentials in the products offered.

### Conduct criteria:

- 4 Some uncertainty should exist in the minds of rivals as to whether price initiatives will be followed.
- 5 Firms should strive to achieve their goals independently, without collusion.
- 6 There should be no unfair, exclusionary, predatory or coercive tactics.
- 7 Inefficient suppliers and customers should not be shielded permanently.

---

<sup>17</sup> “The term ‘workable competition’ was first used by J M Clark in his article ‘Toward a Concept of Workable Competition’, *American Economic Review*, Vol. XXV (June, 1940), pp. 241-56.” In Jesse W Markham, “An Alternative Approach to the Concept of Workable Competition”, *The American Economic Review*, Vol. XL (1950), pp. 349-61, at footnote 1. The latter article is reprinted in Richard B Heflebower and George W Stocking (eds.), *AEA Readings in Industrial Organization and Public Policy*, Homewood, Ill.: Richard D Irwin Inc. 1958 (Ch. 4, pp. 83-95).

<sup>18</sup> F M Scherer, *Industrial Market Structure and Economic Performance*, Rand McNally & Co, Chicago, 1970, p. 37.

- 8 Sales promotions should not be misleading.  
9 Persistent, harmful price discrimination should be absent.

Performance criteria:

- 10 Firms' production operations should be efficient.  
11 Promotional expenses should not be excessive.  
12 Profits should be at levels just sufficient to reward investment, efficiency, and innovation.  
13 Output levels and the range of qualities should be responsive to consumer demands.  
14 Opportunities for exploiting technically superior new products and processes should be exploited.  
15 Prices should not intensify cyclical instability.  
16 Success should accrue to sellers who best serve consumer wants.

J M Clark himself was particularly concerned about the static nature of perfect competition. "As a standard of so-called 'perfection', it is one-legged, focusing on the essentially static objective of cost-price equilibrium, to the neglect of the dynamic objectives of progress."<sup>19</sup> (page 245)

He said that his proposed concept of workable competition would need to have a number of important features. Significantly, he says "I will put first the elements required for progress as being most important, since even a small continuing gain outweighs a substantial gain of the once-for-all variety." This first group of objectives, embodying the elements required for progress, are

- progress in economical methods of production
- an amply differentiated range of qualities and types of any given product to choose from, and
- new products developed.

The second group of objectives is associated with the diffusion of the benefits of progress:

- to customers in lower prices or to workers in higher real rewards
- so that a renewal of differential profits can only be had by renewed innovation. "The dynamic system is not one of elimination of profits, but one of erosion and recreation, both of which are jointly essential." (page 248)
- the creation, reduction and recreation of differential profits in different industries as well as for different firms
- leading to growth via the distribution of incomes.

A third group of objectives is concerned, not with products and prices, but with the conditions of competitive rivalry. "...efficiency and the diffusion of its benefits should not be dependent on the good will and arbitrary decision of private producers, nor on direct governmental order, but on a situation in which normal business motives impel business units (acting independently) to conduct that will tend to further the desired results." (page 250)

The concept of workable competition received a mixed reaction – what Scherer calls "an explosion of articles... many in substantial disagreement with each other". Some economists sought to formalise the necessary conditions for workable competition, or to classify particular industries in terms of workableness of competition there. Others objected that both endeavours were impossibly subjective, and that it was difficult to evaluate an industry that seemed to meet

---

<sup>19</sup> J M Clark, "Competition: Static Models and Dynamic Aspects", *The American Economic Review*, Vol. XLV (Proceedings of the AEA, 1955), pp. 450-62. Reprinted in Heflebower and Stocking, ch. 14, pp. 244-61. Quotations from this reprint.

some but not others of the proposed criteria. Textbooks in industrial organisation<sup>20</sup> made reference to the concept, but the name workable competition seems to have disappeared from active economic discussion by the late 1970s. However, many of the ideas lived on in economic analyses under the rubric of the Structure – Conduct – Performance framework. And other aspects that concerned the proponents of workable competition – notably innovation – continued to be the subject of analysis and development, not least by economists in the Austrian tradition.

### **18.3 Competition as a process**

One line of thinking that influenced the concept of workable competition, and that has continued to develop, is associated with the work of Austrian economists such as Schumpeter, Hayek and Kirzner. Though there are naturally differences between them, central to the thinking of all of them has been a concern about the implications of knowledge, uncertainty and time. They all see competition as a dynamic process taking place over time, rather than as a static equilibrium state at a point in time.

Schumpeter coined the description of competition as “the perennial gale of creative destruction”. He drew attention to the work of competition both in building up new structures – in creating new products, services, firms, industries etc – then in supplanting them as a result of further innovation in other products or industries. He emphasised that competition had to be seen in this long run context. It was not simply a matter of setting price equal to marginal cost in order to make full use of any product, it was also important to provide the conditions under which innovation would be encouraged in order to create the product in the first place. This could include rewards for taking successfully taking risks and possible by devices to limit risk and uncertainty, subject to competitive challenge over time.

Hayek pointed out that when economists referred to consumer preferences and the techniques of production being “given”, this misleadingly implied that they were known somewhere or to someone. In fact, far from being gathered together in one place, such knowledge was dispersed throughout the entire economic system. The problem of securing an efficient allocation of resources was not to work out where the resources should be used, given a knowledge of all these preferences and production possibilities, but rather to discover what these preferences and production possibilities were in the first place. The significant role of the competitive market was to do this, and to convey this information to all market participants by means of the price mechanism. Broadly speaking, prices were all they needed to know. It followed that the job of a central planner working without such prices was not simply to set prices equal to cost, but first to discover the preferences of customers and the techniques of production, in order to work out what goods and services ought to be produced in the first place. Even where a regulator could assume the existence of certain input prices, the task was not simply to set output price equal to marginal cost – it was also necessary to ascertain what the efficient cost of production would be.

Kirzner developed these ideas by focusing on the concept of entrepreneurship or discovery of opportunities. The role for this is missing if perfect information is assumed. But in reality, all market participants are ignorant of many relevant things. The prospect of profit in the competitive market, and the fear of loss, provides the incentive on firms to discover and supply what

---

<sup>20</sup> For example, J F Pickering, *Industrial Structure and Market Conduct*, Martin Robertson, 1974, as well as Scherer, 1970.

customers want. Customers have similar incentives to discover what they like and who can supply it best. There is then a role for advertising and marketing – which is missing in perfect competition - to alert potential customers to the existence or merits of new products.

In sum, for present purposes, an important Austrian contribution to thinking about competition has been a stress on the need to consider utility regulation in a broader context of knowledge and time. Regulation is not simply a matter of setting price equal to cost – it must also consider (1) how to provide incentives on firms to respond to changes in demand and techniques of production, and to innovate in these and other respects, and (2) how to collect and use information about products, techniques of production and customer preferences. If competition is recognised as a process over time, instead of as an equilibrium state, then regulation has to replicate more of this competitive market process than it has done hitherto.

Many other economists have contributed to the development of thinking on competition over the last half century. There has been much formal work on the implications of imperfect information, especially in the context of game theory models of asymmetric information and principle-agent models. There has also been a growth in theoretical and empirical work on regulatory price caps and other incentive mechanisms.

#### **18.4 Public choice and the theory of economic regulation**

One line of developing thinking deserves mention for its impact, not so much on the understanding of competition as on the understanding of the alternatives to competition. The theory of public choice sought to analyse the determinants of the behaviour of governments, politicians, regulators and other public servants, analogous to the analysis of private choice by consumers and private businesses. Some economists looked in particular at how the decisions of regulated firms would differ from those of unregulated firms. The theory of economic regulation sought to explain how and why regulation was introduced.

The thrust of this work is that public choice is in certain broad respects predictable, just as private choice is, but is not in general the same as the welfare-maximising form of choice hypothesised in much of the welfare economic literature. For example, there were early suggestions of “regulatory capture” - the idea that regulation comes to serve the interests of the regulated companies rather than the interests of customers. However, numerous studies found that an important aim of regulation was to reduce competition where it was too severe, rather than to replace it where it was not active enough. To this extent, regulation was designed to protect companies, it did not happen by accident. Yet other studies have suggested that regulation might be a relatively efficient way of accommodating uncertainty where large and durable investments are involved.

From the welfare economics standpoint, there is a possibility of “government failure” as well as market failure. In considering whether to replace the market outcome, it needs to be considered whether the government outcome would in practice be better or not.

The relevance for the present assignment is the need to consider any implications of these ideas for the operation of a proposed regulatory process. Also, of course, it is necessary to compare the likely outcome against the reality of present or alternative methods competition or of regulation, not against hypothetical ideals thereof.

---

## **18.5 Transactions costs and competition**

The implications of transactions costs are gradually receiving more recognition. One important aspect of this is the determination of the nature of the firm and the structure of an industry, including what is provided within the firm and what is bought in the market. The proposition is that a firm can economise on the cost of transacting in the market, so that firms expand to the extent that such savings are possible. An important implication for present purposes is that acquiring information and engaging in price control negotiations are both costly activities. It is necessary to consider how to minimise or reduce these costs in designing any regulatory framework.

Limitations of time and space prevent consideration of all these areas. The present discussion concentrates on the workable competition concept on which the Court put so much emphasis, together with the related ideas from economic thinking on competition as a process and in the general area of information provision.



---

## **Attachment 3: Assessment of Price Service Offerings by Professor David K Round**

As submitted to the Queensland Competition Authority in December 2002, in the determination of the Form of Regulation for Electricity Distribution to commence from 1 July 2005.

---

### **PROPOSED PRICE-SERVICE OFFERING (PSO) APPROACH TO REGULATION BY ENERGEX**

**19.**

**by  
David K Round**

**Professor of Economics  
Director, Centre for Applied Economics  
University of South Australia**

**20 December 2002**

#### **1. Introduction**

I have been asked by Energex to assess its proposed PSO approach to regulation against the following two criteria:

- whether it accords with developing thinking on the nature of competition
- whether it is practical, robust and feasible as a method of regulating energy networks.

I have been requested to make this assessment within the context of the Australian regulatory framework, in the light of recent landmark events such as the Productivity Commission report and the decision by the Full Supreme Court of Western Australia (WASC hereafter) in what has become known as the Epic matter, and after having read the recent assessment of price-service offerings provided to Energex by Professor Stephen Littlechild.

I note here that the recent decision by the WASC in the Epic matter has led to the belief by many that utility regulators in Australia have been found to have acted contrary to best regulatory practice, as well as to the policy goals spelled out in various reform documents. While I find little to disagree with in the expressions and analysis of the WASC decision, there still exists, as I understand it, a possibility of leave being sought to appeal to the High Court of Australia. Revenue cap regulation is not yet dead in Australia as a result of this decision, and the dead hand of precedent (or lack thereof) will likely serve to restrain any wholesale rush to an immediate acceptance of PSO-based regulation in the short run.

#### **2. Background**

The WASC decision has brought to a head the unrest surrounding price regulation of utilities in Australia. It has long been recognised, by empirical economists at least, that real world competition is a process rather than a static equilibrium phenomenon, but regulatory methods

have tended to ignore this and instead have focussed on achieving pricing outcomes compatible with the theoretical norms of productive and allocative efficiency achieved in long run equilibrium in perfectly competitive markets. In focussing on these static welfare criteria, sight has been lost of the third type of efficiency, dynamic efficiency, which is achieved on the supply side when firms constantly strive to innovate and adopt the latest technologies, and on the demand side when firms seek to offer consumers real choices in all aspects of the price-product-service package, as was first clearly enunciated in Australia in 1976 by the then Trade Practices Tribunal in the QCMA matter.

Concentration by regulators on trying to replicate outcomes consistent with those applying in long run perfectly competitive equilibrium has also led to a lack of consideration of market dynamics - the process by which firms in markets seek to compete on the way to equilibrium (not that such a state is ever achievable, as markets are constantly being 'shocked' by all manner of exogenous forces). Thus, regulators have concentrated on achieving static productive and allocative efficiency norms through what has become known as a 'building block' approach, whereby the revenue that a firm is allowed to earn is based on a return on its assets (determined through the calculation of a WACC on its asset base, measured on a DORC basis), plus a return of assets (depreciation), and calculated on the basis of assumed efficient and prudent operating procedures.

The focus has typically been on maintaining existing service levels at low 'competitive' prices, in order to curb or eliminate inefficient monopoly rents. Such a heavy handed top-down approach is intrusive and potentially distorting, based as it is on a benchmark of little relevance to modern market conditions, especially markets where supply conditions especially make it unlikely that more than one or two firms could efficiently exist in the market, and with its demonstrated chilling effect on innovation in technology, quality and service offerings.

The hallmark of a workably competitive market is flexibility and independence in decision making, with no coercion, and freedom to choose on the part of both producers and consumers. This should be the implicit goal in theory of any regulatory scheme, but it is one that has in practice been subverted by a misguided application of perfect competition theory in the search for computational specificity and regulatory objectivity.

What is needed is not a revenue cap based on cost of service provision, but flexible regulation that can adapt to market changes, encourage innovation, look after the valid interests of both consumers and producers, and above all be relatively non-intrusive yet transparent. In the real world returns can fluctuate above and below the norm, depending on market forces. It is a denial of market realities to fix revenue caps for lengthy periods regardless of market changes. More regulatory focus is needed on market processes and market dynamics, rather than on outcomes determined by reference to hypothetical (and generally unattainable) market conditions.

When utility markets are structured such that regulation is deemed to be necessary in the public interest, the goal should be to try and replicate as closely as possible (remembering that perfect replication will likely never be achieved on any benefit-cost reckoning) the operation of a workably competitive market. Indeed there now appears to be widespread support for a regulatory approach that promotes dynamic efficiency, coming from various governments, courts, academic researchers, advisory committees, and even from some regulators. The concept of workable competition is understood generally to embrace the competitive pressures of genuine rivalry, strategic behaviour, and interaction between sellers and between buyers and sellers, responding freely and independently to market forces of both supply and demand, all of

which compels firms to operate efficiently and to be innovative. This is the environment that regulation should seek to emulate, and this is what the WASC effectively has said that regulators should follow as their guiding model.

However established precedent provides a sturdy lifeline to cling to, from which many of the stakeholders in the regulatory process will probably be reluctant to cut themselves adrift. In industrial economics, it can be shown that it is generally in the interests of incumbents to behave strategically and deter new entry. The same applies to the emergence of new regulatory methods that disturb the status quo – many of these stakeholders may prefer to retain the system they are familiar with, with its predictability, known rents, advantages and disadvantages, and will resist the introduction of new regulatory techniques with their attendant unknown risks, uncertainties, asymmetries and implementation costs.

A problem with using workable competition as a regulatory objective is that there is no magic formula that defines its individual dimensions or outer boundaries. It is, if you like, a philosophy rather than a precise prescription. Different markets with quite different characteristics could be judged as workably competitive even though they displayed quite different structural and behavioural features. What Energex sees as being workably competitive may not be seen thus by others, depending on which of the many conditions of workable competition are thought to be of paramount importance. So use of a workably competitive framework as the goal of regulation might well entail less regulatory certainty, at least in the short run, both within and between various regulatory authorities, in terms of precedent and the ability to predict precise regulatory outcomes. The learning curve may be both quite flat and punctuated with considerable learning difficulties.

Nevertheless, the long term gains in terms of regulatory decisions, consumer choice and options available to regulated firms may well be worth the short term adjustment problems. Regulated firms will simply be facing a different type of regulatory uncertainty, but one which, I suggest, they are better able to manage by means of the ways in which they propose to offer PSO packages that reflect what could reasonably be expected to occur in a workably competitive market. Under such a model of regulation, the outcome lies much more pro-actively in the hands of the regulated firms than is the case under the present revenue cap regime. Here the regulated firm is forced to submit its requests for desired price levels on which the regulator is required to make difficult quantitative decisions on investment, cost and rate of return parameters upon which agreement is never likely to occur, and whose empirical determination is not without considerable controversy in terms of there being no one objectively determinable correct answer.

### **3. PSO Offerings as the Emulation of a Workably Competitive Market**

Energex is proposing a form of price-service offerings as a model of self-regulation designed to replicate what might occur in a workably competitive market. These offerings will in the first instance be made available to all of its customers individually, and are derived from Energex's expectations as to three different packages that might be attractive to consumers. They are founded in its belief that these packages are of the sort that would emerge in a workably competitive market, and are envisaged to become over time more detailed and tailored more precisely to satisfy smaller groups of consumers with similar demands and consumption characteristics, after extensive and on-going consultations with various consumer representatives.

This approach contrasts with the current one-size-fits-all approach whereby Energex presents its various services in a monolithic manner, at a price determined by regulatory revenue cap intervention. Consumers under this model effectively have no say in what services are available or on the price they have to pay. They are disenfranchised in effect and the suppliers are not encouraged to seek dynamic efficiency gains by constantly trying to lead the market. The fire of the competitive process is lacking.

It is my understanding that, in the absence of full retail contestability (FRC), Energex as distributor has developed these PSO offerings and proposes to offer them through the retailers. Some consultation has been carried out with retailers, but I am instructed that they would be fully consulted on PSO offerings when FRC occurs. It is not clear to me whether, under FRC, independent retailers who are not acting as franchisees of Energex would be free to offer differentiated versions of these PSO offerings, depending on each retailer's best commercial judgments. If so, the potential for even greater levels of consumer choice is enhanced.

To accept the PSO offerings as a valid regulatory procedure/outcome requires the acceptance of what I believe to be a major paradigm shift in Australia. Yet the regulatory (both State and Federal), Court and Tribunal record shows that the traditional revenue or price cap methods of regulation have produced a constant flow of serious disputes leading to significant delays and uncertainties, and high opportunity costs in terms of waste of administrative, legal and management resources. I believe that the mandate exists in terms of review recommendations and source legislation, and indeed in occasional musings by some regulators, for a behaviourally focussed approach that seeks to achieve market outcomes consistent with those obtainable in a workably competitive market. The PSO approach that is proposed by Energex appears to be consistent with this philosophy.

## **4. Evaluation of the PSO Proposals**

### **4.1 Introduction**

I see many positives in a PSO approach to regulation, in so far as it attempts to offer a series of outcomes not dissimilar, at least in theory, to the sort of outcomes that a workably competitive market could yield. A major difference is that it requires Energex to produce internally and voluntarily, absent market pressures, the sorts of consumer-oriented deals that market forces might have compelled them to develop.

The PSO packages proposed by Energex are aimed to be innovative and to provide incentives for investment, unlike the current revenue cap regime which locks Energex in to an investment program for five years and removes incentives to expand within that period. The packages provide incentives for all three types of efficiency to be achieved. They provide for flexibility in price and can lead to profits both above (if Energex performs well) and below (if it fails to produce what customers have contracted for or does so inefficiently) the norm. In this way they replicate the process of workably competitive markets, rather than producing the hypothetical end result of a perfectly competitive market, whatever that might be in the real world. In doing this the PSOs restrain monopoly rents but may not eliminate them entirely in the short run – but there is nothing wrong with this outcome if the prospect of such gains stimulates long run dynamic efficiency.

But the PSO packages do not decrease the need for regulatory intervention or at least involvement in the market, albeit perhaps this will now require more general oversight rather

than direct regulatory decision-making on key decision parameters, especially with respect to price. However, the regulator will certainly need the power to step in should the offerings not provide sufficient choice in package options, or should the package prices be unacceptable to consumers.

#### 4.2 Raised consumer expectations and the need for internal cultural change

PSOs will not be all plain sailing for Energex. While the three initial offerings may have been already decided upon (and I believe that Energex should explain carefully how/why it has compiled the specifics of these three bundled offerings – I agree that it is a matter of balance but Energex needs to be ready to counter defend any attacks that the PSOs that it has developed have been created only for its own self-interest), their release may engender heightened consumer expectations of an even greater number of more finely tailored packages, which will involve considerable and on-going management time, consultations with consumer groups, interactions with the regulator and so on.

I imagine that quite significant internal cultural change will be needed in order for Energex's staff to become more consumer-focussed and responsive to consumer wishes. The process outlined to me suggests that consumers will, to the extent possible, be given what they want so long as they are prepared to pay the appropriate amounts, rather than taking what Energex is prepared (or regulated) to give them, as is the case under the current form of regulation. Such consumer sovereignty will place Energex in a quite different commercial, social and regulatory environment. A new breed of management and staff attitudes and entrepreneurship will be essential. All of this will be costly in the short run, but implementation of radical new strategies is never easy.

#### 4.3 The costs of the consulting process

A problem that Energex will especially have to consider is the cost to it of the consulting process, including the cost eventually of involving retailers, and presumably the need to ring fence its own retail activities; the need to make sure that the widest possible spectrum of consumer groups is consulted; the risk of raised consumer expectations not being met; and the need to ensure that consumers do not suffer from any sort of bargaining inequality.

This last issue is a most important one to resolve. Consumers usually will not hold the same level of information on package options as will the supplier, and even if they do have access to all the necessary information in order to make optimal choices, they may not have the ability to interpret it correctly. To ensure equality of bargaining power, they will need help. For example, to be fully transparent, especially on prices, Energex might need to invite inspection and assessment of its costs. This could perhaps be provided by the regulator, or Energex could agree to fund an independent consultant to advise consumers about the various packages being put forward. In addition, in this process errors of fact and interpretation will be made by all parties and Energex needs to plan for this. Energex also needs to realise that the regulator may get closer to the consumer in this process than heretofore, and needs accordingly to be alert to any sort of capture associated with this.

Energex will need to take care that it does not appear to engage in any form of discrimination, price or otherwise, in setting up and delivering its PSOs. While it will be up to consumers to choose which package they will opt for, the pricing of the components of each package, especially in relation to cost of provision, will need to be carefully considered to eliminate any risk of allegations of price discrimination being made. It will be particularly important to ensure

that the base package is not structured in such a way as to depart significantly from the offering currently available to consumers, unless it is clearly to their benefit, and also to ensure that it cannot be said to be structured in such a way as to 'force' consumers to choose a more expensive package.

Thus the PSOs are neither cost-free nor risk-free for Energex.

#### 4.4 Issues surrounding precedent and the involvement of the regulator

It is unlikely that the PSOs will reduce the overall uncertainties attached to revenue cap regulation. Indeed, given that PSOs in a sense potentially invite less hands-on regulation, this lack of interventionary precision, for want of a better word, may involve Energex in some greater level of uncertainty than might have been taken into account in planning for this market-disciplined approach. There will be less definitive precedent for Energex to follow, certainly at first, although this should not be a major concern if it is serious about developing PSOs that are consistent with the outcomes of a workably competitive process, because in a truly competitive market no firm can be certain of any outcome, especially in the short run. To the extent that precedent will exist in the future, it will relate to the outcomes of the regulatory process, rather than to the regulatory outcomes themselves.

The regulator will still be involved, albeit less intrusively and in a more light-handed way (the intrusive role now belongs to customers), but perhaps no less in terms of quantum, given the different nature of the PSO packages and the need for careful probing of them. The pressure on Energex to deliver on its packages will be high, and the size and nature of the penalties should it fail to deliver, and the implementation of them, are bound not to be without controversy.

The role of the regulator will in fact be quite different under the PSO model. It will be more of a facilitator at the first stage, helping the parties to negotiate and providing advice to consumer groups on their PSO package options. It will, presumably, be responding to, rather than initiating action. After the PSO packages have been agreed to, its role will revert to a monitoring one, to ensure that service provision is meeting its promised levels at the agreed prices, and only if this is not occurring will its role revert to a more traditional intrusive one, but still falling far short of it being the final arbiter of service offerings, quality and price levels.

#### 4.5 Benchmarks and performance evaluation

I expected to find more precise detail on how Energex would measure whether it was meeting its target levels of performance. Feedback and evaluation mechanisms are crucial in a PSO package. In addition, more detail is needed on the penalty mechanism for failure to achieve promised targets – for example, how it is developed, how it is enforced, and appeal procedures; that is, when and under what conditions the regulator can step in on behalf of consumers.

Energex does propose five monitoring tests by which it may be judged. The first is the pure market-based one of giving more and charging less – putting its offerings to the market test of acceptability by consumers, with no direct and only minimum indirect input from the regulator. Should this not transpire, that is, should Energex give more but propose to charge a higher real price (note I am assuming here that the five tests proposed by Energex are ex-ante in nature), then the regulator would need to assess its conduct according to four additional market-focused tests: consumer willingness to pay; the willingness of Energex to supply; a comparison of what has occurred with benchmarked performance via a series of KPIs developed from observations

of good industry practices of other utility supply firms; and a reconciliation of cost of service based on the past, with any monopoly rents washed out.

To convince the market and the regulator that its PSOs are fair and reasonable, Energex should provide extensive details on how it proposes to benchmark them, in the process developing a detailed and justified series of KPIs against which its performance could be evaluated, both in terms of producing new packages and in terms of delivery of the ones currently on offer. At the moment it appears that consumers are being asked to rely on the good faith of Energex as it submits itself in the first instance to a limited form of exposure to market discipline. It needs to provide more complete detail to earn both the consumers' trust and prove to the regulator that what it is offering is either best practice, or close to it, and certainly a major improvement on what currently it has been restricted to offer.

#### 4.6 Future PSO package offerings

At first the burden of managing three PSOs may not appear to be great, at least from an ex ante perspective, but executing and operating them may entail much more effort than currently planned for. In addition, Energex needs to evaluate just how many PSOs it should offer (i.e., is there an optimal number of them?), and how frequently should they be changed, if it is to live up to its contention that by offering PSOs it is replicating the behaviour of a workably competitive market. I am instructed that the first round of PSOs will apply for a five-year period, equating to the current term of Energex's revenue caps, on the basis of the argument that the long term nature of the underlying assets demands such a lengthy period. However, given that consumers will only have choice at the end of long contract periods and no flexibility to change within them (which many would not think of as being characteristic of a workably competitive market), I would suggest that consideration be given to PSOs with shorter periods, say three years. Not all packages need be for three years, and indeed a structured set of PSOs could be offered in due time with prices that reflect not only the content but also the flexibility offered to change packages more frequently. I note here generally that it is not easy for me fully to evaluate what Energex is putting forward in its PSOs as no detail has been provided to me on the detailed contents of the packages.

#### 4.7 Cost issues

I presume that the base level PSO will set the standard for costs. I see no mention made of cost control throughout the contract period, other than the implied profit penalty Energex will suffer if its costs rise above the level contemplated when it negotiated its package prices. Energex may well say that it is in its own pecuniary interests to control costs, which is undoubtedly true once the contract is signed, but some problems remain. For example, what will it do with costs that increase outside of its control? Presumably it will simply pass these on, but this needs to be made explicitly clear in its contracts and it will possibly need to provide for some independent audit of these cost increases.

In addition, Energex may be able to roll cost increases of its own making into new PSOs, if over time many more of these are developed and they come on to the market at different points of time. This would not be in the best interests of particular groups of consumers, and would introduce a form of intergenerational price discrimination. Nor would Energex's failure to minimise costs be consistent with that expected of a firm operating in a workably competitive market, where it is expected that prices will move in line with costs, where the latter reflect productivity gains, scale and scope economies, technological change and so on. With a price cap form of regulation it could be expected that Energex would be forced explicitly to

acknowledge these cost savings and pass them on to consumers. With PSOs this pressure could appear to be less likely. Consumers have to rely on the word of Energex that its offerings and cost levels are in line with those that would be achieved in a workably competitive market, unless they and/or the regulator investigate costs carefully. Generally, I find that the PSO proposal focuses on price and service offerings – as the name implies – but it appears to have no transparent built-in cost check as such. I suggest that more attention be paid to this issue.

## 5. Summary

The concept of PSOs is an innovative one designed to provide market-type choices for consumers of a sort not usually found under traditional types of utility regulation. It favours innovations in quality and in the variety of service offerings, and puts a premium on both discovering and satisfying current and future consumer needs. The concept is clearly consistent with the law and intent of Australian Parliaments when they established their regulatory principles. Consumer choice and dynamic efficiency are enhanced (consumers currently have no effective choice in the package that is supplied to them), but at the expense of greater transactions and search costs. If Energex betters its specified service standards in terms of efficiency, it will gain. If it fails to achieve these, it will have to pay penalties to consumers. In theory the introduction of PSOs could lead to a Pareto optimal improvement for both Energex and consumers, as well as making the role of the regulator less technical and more one of assessing processes and packages rather than focussing on the technical minutiae of pricing, WACCs and so on.

The role of the regulator will have to change from one of working on behalf of, but largely distant from, consumers, to one of more direct interaction with them to assist in their dealings with Energex. But the regulator will still have to give its seal of approval to the price to be charged for each PSO package, I believe, and will have to approve of the reward/penalty structure. So it will not be entirely distant, albeit less hands on than at present. It will certainly have to resolve its twin roles of impartial regulator and 'friend of the consumer' if it is required to help consumers make their deliberations on the PSO packages being offered.

Energex will need clearly to have to work on a quite different nature and level of intersections with the regulator. This may take some time and patience. Energex will also have to develop its implementation systems carefully and ensure appropriate feedback loops are in place.

As with all such new concepts, the devil is in the detail of the implementation and operation of the new PSO packages. A major problem to be considered is that there are a very large number of criteria that can be used in a variety of combinations to identify a workably competitive market. The subjective nature of this concept will make it easy for those opposed to what Energex is proposing to argue that it should be pursuing other criteria that more readily embody what these parties see, for their own ends, as being characteristic of a workably competitive market.

Energex will need to consider how much real choice can be offered in its PSO packages, and the costs involved in offering a greater number of packages to progressively more narrowly defined groups of customers. Consideration will need to be given to the socially best length of contract for packages, and whether consumers will be given the flexibility to switch out of packages mid-term, and under what conditions. Is the bundling of services in the packages based on absolutes as seen by Energex (in terms of supply imperatives), or can the service combinations and levels be seen as relatives based on supply and demand conditions as communicated by customers' wishes, and by reference to the range of offerings of other service providers? I note here that Energex appears to have not allowed for any possible need to take



---

other rival's activities into account in its proposals. It does need to be mindful of this possibility, and of the regulator seeking to compare its offerings with those of other service providers of electricity, gas, or water.

The process is still subject to regulatory uncertainties and risks for Energex. These problems should be less burdensome and more easily manageable, it is true, but in the short run considerable interaction will be needed with consumers and the regulator, and new long term relationships will need to be established. I doubt whether outcomes will be easily predictable, certainly at first, and the costs involved in this process will not be insignificant. Greater levels of specificity in dealing with customers will be needed. Energex will need to ensure that it meets with all representative consumer groups; that it helps facilitate consumer/regulator interaction; and it may also need to be prepared to fund the transactions and search costs that this new process may impose upon consumers, if they are to exercise true choice and provide an effective part of the market discipline that Energex proposes to subject itself to. Management and staff will need to view, and respond to, customers in a much different light.

The regulatory approach that Energex is proposing is quite consistent with modern theoretical, empirical and political thinking on the nature of competition and the type of goals the competitive process can achieve. It focuses on the dynamics of markets and offers incentives for being innovative and promoting dynamic efficiency. Its logic is carefully spelled out and its method involves a sensible balance of checks and profit-making opportunities. It offers consumers a mixture of quality and service options, priced according to the effort and facilities required to deliver them. It does appear to offer the opportunity for consumers to be involved in the setting up of the PSO packages, but at the moment it does seem to involve them in a passive rather than pro-active manner. Penalties are provided for if Energex fails to deliver its contracted PSO package contents. It can earn rents on its entrepreneurship if it can deliver the packages in a more cost-effective manner than was apparent at the time of contracting them.

If Energex can deliver what it promises, both the long run private as well as public net gains of a PSO approach to regulation could be impressive.

## **Attachment 4: References**

ABARE, "Australian Energy: Projections to 2019-20", ABARE Research Report 01.11, 2001.

ACCC, "Access Regime", November, 1995.

ACCC, "Draft Decision: GasNet Australia Access Arrangement Revisions for the Principal Transmission Network", August, 2002.

Access Economics, "Electricity Reform: Power Loses its Passion for Pollies", Access Economics Monitor, March, 2002.

AGE, "Regulation Turns Investors Off", Hopkins, P., 16 August, 2002.

AMP Henderson Global Investors, et al, "Joint Industry Submission to the CoAG Energy Market Review", June, 2002.

Areeda, P, "Essential Facilities: An Epithet in Need of Limiting Principles", Antitrust Law Journal, 58, 1990.

Arrow, K, "Economic Welfare and the Allocation of Resources for Invention", in *The Rate and Direction of Inventive Activity*, Princeton University Press, 1962.

Asher, Louise, (Victorian Hansard), "Second Reading of the Essential Services Commission Bill", 25 September, 2001.

AusCID, "Essential Services Commission", Submission to Department of Treasury and Finance, Victoria, September, 2000.

AusCID, "Submission to the CoAG Energy Market Review", Victoria, April, 2002.

AusCID, "Towards a Truly National and Efficient Energy Market - Response to Draft Report", Submission to Energy Market Review, December, 2002.

Australian Financial Review, "Power Reforms Need Jump Start", ed., 10 September, 2002.

Australian Financial Review, "Flick the Switch on Reform", Mitchell, A., 2 October, 2002.

Australian Gas Association, "Review of Victorian Gas Access Arrangement: Implications for the Draft Decision from the Epic Energy Supreme Court Judgement", Submission to the Essential Services Commission, September, 2002.

Australian Gas Association, "Victorian Gas Transmission Review – GasNet Access Arrangement Revision 1: Implications for the ACCC Draft Decision from the Epic Energy Supreme Court Judgement", Submission to the ACCC, September, 2002.

Australian Gas Association, "Comparison of Building Blocks and Index-based Approaches", Submission to the Utility Regulators' Forum, November, 2002.



---

Australian Gas Association, "Towards a Truly National and Efficient Energy Market - Response to Draft Report", Submission to the Energy Market Review, December, 2002.

Beesley, M A, "Price Regulation and Competition", in Lectures on Regulation, Centre for Business Strategy, London Business School, 1991.

Beesley, M A, "RPI-X Principles and their Application to Gas", Text of Regulation Series V Lecture, 1995.

Beesley, M A, "Regulating Utilities: A Time for a Change?", Institute of Economic Affairs, London, 1995.

Beesley, M A, various papers on regulation provided to Prices Surveillance Authority, Melbourne, 1994 to 1995.

Beesley, M A, "Regulating Utilities: Broadening the Debate", IEA/LBS readings 46, London, 1997.

Clark, J M, "Towards a Concept of Workable Competition", American Economic Review, June, 1940.

Clark, J M, "Competition as a Dynamic Process", Brookings Institution, 1940.

Clark, J M, "Competition: Static Models and Dynamic Aspects", American Economic Review, May, 1955.

CoAG, "Towards a Truly National and Efficient Energy Market", Final Report, December, 2002.

ENERGEX, "Submission to the Productivity Commission: The National Access Regime", December, 2000.

ENERGEX, "Supplementary Submission to the Productivity Commission: National Access Regime", June, 2001.

ENERGEX, "Submission to Council of Australian Governments Energy Market Review", April, 2002.

ENERGEX, "Submission to the Committee of Inquiry into the Competition Provisions of the Trade Practices Act 1974 and their Administration", June, 2002.

Essential Services Commission, "Review of Gas Access Arrangements: Final Decision", October, 2000.

Hayek, F A, "Competition as a discovery procedure", in New Studies in Philosophy, Politics, Economics and the History of Ideas, Routledge and Kegan Paul, 1978.

Hilmer Report, (Independent Committee of Inquiry into Competition Policy in Australia), "National Competition Policy: Report by the Independent Committee of Inquiry into Competition Policy in Australia", AGPS, Canberra, 1993.

International Chamber of Commerce Australia, "Submission to the Trade Practices Act (1974) Review", Melbourne, July, 2002.



---

IPART (Independent Pricing and Regulatory Tribunal of NSW), "Regulation of Electricity Service Providers – Incentives and Principles for Regulation", Sydney, 1999.

Johns, B, "Submission to the Office of the Regulator-General 2001 EDPR", Consultation Paper No 2, 26 February, 1999.

Kay, J., "The Truth about Markets: Their Genius, Their Limits, Their Follies, Penguin, Allen Lane, 2003.

Littlechild, S C, "Privatisation, Competition and Regulation", Institute of Economic Affairs Occasional Paper No. 110, February, 2000.

Littlechild, S C, "Regulators, Competition and Transitional Price Controls: A Critique of Price Restraints in Electricity Supply and Mobile Telephones", IEA, 2001.

Littlechild, S C, "Competitive Bidding for a Long-Term Electricity Contract", Review of Network Economics, Vol 1, Issue 1, March, 2002.

Minter Ellison, "Epic Decision Re-Writes the Rule Book for Gas Access Regulators", Utilities Update, October, 2002.

NECG, "Submission to the Productivity Commission Inquiry into the Review of the National Access Regime", Canberra, 2000.

Pickering, J F, "Industrial Structure and Market Conduct", Martin Robertson, London, 1974.

Productivity Commission, "Price Regulation of Airport Services", Draft Report, August, 2001.

Productivity Commission, "Review of the National Access Regime", Final Report, September, 2001.

Scherer, Frederick M, "Industrial Market Structure and Economic Performance", McNally, Chicago, 1971.

Schumpeter, Joseph A, "Capitalism, Socialism and Democracy", Allen and Unwin, 1947.

Supreme Court of Western Australia, Re Dr. Ken Michael AM; Ex Parte Epic Energy (WA) Nominees Pty Ltd and Anor [2002] WASCA 231, 23 August, 2002.

United Energy, "Response to Office of Regulator-General Consultation Paper No 1", October, 1998.

United Energy, "Response to Office of Regulator-General Consultation Paper No 2", February, 1999.

United Energy, "Response to Office of Regulator-General Consultation Paper No 3", March, 1999.

United Energy, "Response to Office of Regulator-General Consultation Paper No 5", February, 2000.

United Energy, "Response to Office of Regulator-General Draft Decision", July, 2000.

