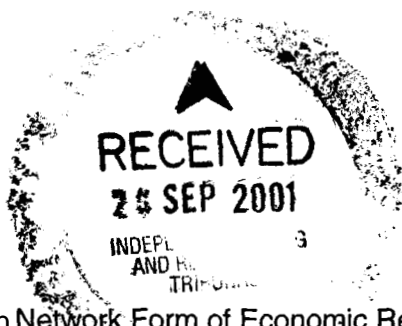


21 September 2001



Electricity Distribution Network Form of Economic Regulation Review  
Independent Pricing and Regulatory Tribunal of NSW

PO Box Q290  
QVB Post Office  
SYDNEY NSW 1230

ATTENTION: Michael Seery

Dear Mr Seery

Please find attached a copy of ENERGEX's submission to IPART's review of the Form of Economic Regulation for NSW Electricity Network Charges.

In summary, ENERGEX is of the view that:

- the Code envisages light-handed regulation of electricity distribution, with discretion to jurisdictional regulators to determine its precise form;
- the current cost of service approach to regulation is flawed in a number of key respects, and is not meeting the efficiency objectives of the Code; and
- adoption of true incentive regulation is likely to satisfy all of the pricing objectives of the Code and to achieve the principles of good regulation, in line with the growing support for such an approach as expressed by market experts, regulators and research bodies.

ENERGEX therefore strongly advocates greater exploration of options for true incentive regulation, with a view to moving from a cost of service approach to a true incentive based approach along the lines of the options discussed in its submission.

If you have any queries about this submission please do not hesitate to contact me on (07) 3404 1825.

Yours sincerely

Trevor Lee  
Group Regulatory Affairs Mgr



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**Submission  
to the  
Independent Pricing and Regulatory  
Tribunal**

**Form of Economic Regulation For NSW,  
Electricity Network Charges:  
Discussion Paper**

**September 2001**

## 1. INTRODUCTION

This Paper is a submission to the Independent Pricing and Regulatory Tribunal of New South Wales (IPART) in response to its Discussion Paper "Form of Economic Regulation for NSW Electricity Network Charges" dated August 2001.

This submission seeks to outline the broad views of ENERGEX in relation to the issues raised by IPART in its Discussion Paper.

This submission is a joint submission made by ENERGEX Limited and ENERGEX Retail Pty Ltd. The name ENERGEX will be used throughout this paper as a reference to this group.

## 2. WHAT FORMS OF REGULATION ARE PERMITTED UNDER THE CODE?

The Discussion Paper correctly identifies that the National Electricity Code (the Code) does not confer a precise meaning on the term "form of regulation". The Paper also states that the Code requires that:

*" ... economic regulation shall be of the prospective CPI minus X form, or some incentive-based variant of the CPI minus X form which is consistent with the objectives and principles outlined in clauses 6.10.2 and 6.10.3".*

The Paper then concludes that the Tribunal must regulate DNSPs' tariffs using a CPI-X approach.

However, it is clear the Code envisages that in certain circumstances, a more light-handed form of regulation may be warranted. Section 6.10.4 states that:

*'The Jurisdictional Regulator is responsible for determining which, if any, distribution services provided by a Distribution Network Owner or Distribution Network Service Provider ... should be deemed to be prescribed distribution services and accordingly subject to economic regulation in accordance with the principles set out in 6.10.2 and 6.10.5.'*

The Code goes on to state that the factors that the regulator must have regard to in making this determination include, among other things, the extent of effective competition and the effectiveness of the form of economic regulation (CPI-X) in achieving the efficiency objectives outlined in clause 6.10.2.

The Code's efficiency objectives include:

- an efficient and cost-effective regulatory environment;
- an incentive-based regulatory regime which provides an equitable allocation of efficiency gains between users and network owners and a sustainable commercial revenue stream which includes a fair and reasonable rate of return on efficient investment;
- prevention of monopoly rent extraction;
- creation of an environment which fosters an efficient level of investment within the distribution sector, and upstream and downstream of the distribution services;

- creation of an environment which fosters efficient use of existing infrastructure;
- promotion of competition in upstream and downstream markets and in the provision of network services where economically feasible; and
- reasonable and well defined regulatory discretion which permits an acceptable balancing of the interests of distribution network owners, users and the public interest.

The Code also has higher level objectives which include, among other things to provide a regime of “light-handed” regulation of the market to achieve the market objectives (section 1.4).

Where services are not prescribed distribution services (excluded distribution services), the Code provides it is appropriate to apply a regulatory approach which is more “light-handed” than the CPI-X regulation described in clause 6.10.5, and the jurisdictional regulator must determine the form of regulation which is to be applied. These provisions clearly demonstrate that jurisdictional regulators are not limited to a CPI-X approach, for example in circumstances where the Code’s efficiency objectives could be more effectively achieved through an alternative form of regulation.

It is the intention of this submission to demonstrate that CPI-X forms of regulation, as they are currently applied, are not the most effective in achieving the efficiency objectives of the Code, and that it is therefore appropriate for regulators to explore alternative forms of regulation (including different approaches to utilising CPI-X) to better meet the Code’s objectives.

### 3. DEFICIENCIES IN THE CURRENT CPI-X FORM OF REGULATION

There is a strong and ongoing debate in Australia at present regarding the effectiveness of the CPI-X form of regulation in achieving efficiency objectives. Australian access/price reviews have attracted many submissions from independent parties, including eminent economists, former regulators and advisers to governments on regulation, both here and overseas and international banks and credit rating agencies. These have expressed concerns about the CPI-X form of regulation being applied at several levels:

- the regulatory approaches being implemented appear to abrogate the objectives of National Competition Policy generally and the National Electricity Code in particular; and
- the cost of service/rate of return model, which underpins the particular form of CPI-X regulation that is being applied by Australian regulators, has adverse consequences for economic efficiency, investment and innovation.

Examples of such views include the following.

#### 3.1 KPMG

KPMG has advised several jurisdictions in establishing regulatory regimes. However, it is now criticising how regimes are being implemented, noting the approaches of regulators as: “Examples of regulators who are clearly more comfortable with American style rate of return concepts than with incentive regulation which is explicitly required by the statutory instruments they are supposed to be following.”

KPMG has produced a “report card” on performance of all regulators since the regimes were established against the objectives of policy and the legislative frameworks (KPMG 2000). Paraphrasing the objectives, the report card includes the following comments.

**Objective: Regulators to apply incentive based regimes**

*“Regulators are undermining incentives and promoting rate of return type regulatory approaches”. “No one benefits from rate of return regulation.”*

*‘Regulators appear to be determined that successful firms will earn little more than a modest rate of return and that unsuccessful firms will be directed in how to mend their ways. This is rate of return regulation.’*

*“Australian regulators have shown a particular concern with the level of the rate of return – a concern far in advance of the attention paid to the level of tariffs that results from it. Setting the rate of return has become a determination process using the Capital Asset Pricing Model when, perhaps, CAPM should just be one of the inputs.”*

*“The focus is on controlling inputs – with the implication that a regulator knows best what inputs lead to the best outcomes. This is the antithesis of incentive regulation – which should be about defining outcomes and then allowing regulated businesses to determine the best and most efficient ways to deliver.”*

*‘Rather than using it (the building block approach) as one source of information about an outcome they turned have it into **the** outcome.’*

**Objective: Prevention of monopoly rent**

*“What we are getting: determination to prevent the extraction of monopoly rents, - regression to rate of return concepts.”*

*“Characterising returns to efficiency gains as monopoly rents [is happening] so quickly that incentive is compromised.”*

**Objective: Foster efficient level of investment (and innovation)**

*“The forms (of regulation) favoured by the regulators to date seem to the author at least, designed to anchor the industry in its existing paradigm. Cost tracking revenue controls and lack of the possibility of earning or retaining profits in excess of the assessed rate of return are the most damaging feature of Australian regulators’ preferred approaches.”*

*“Regulators have maintained a consistent downward pressure on allowed rates of return. A determination of ‘strip out’ returns to innovation too quickly blunts the incentive to become more efficient. The pressure on rates of return continues with the current proposals for post tax WACCs.”*

**Objective: Promotion of competition**

*“Pro competitive rhetoric is getting lost in a rate of return like concern to closely track the costs incurred.”*

## Objective: Regulatory certainty and discretion

*“Certainty has been largely sacrificed to the countervailing objective of regulatory discretion.”*

### 3.2 Emeritus Professor Brian Johns

Professor Johns is a former head of the Commonwealth’s BIE, Deputy Chairman of the TPC and Associate Commissioner of the ACCC. He has made a submission to the 2001 EDPR in Victoria criticising the Office of the Regulator-General’s (ORG) approach to regulation and arguing for a model that mimics the characteristics *“... to be found in the real-world competitivemarkets”* and points to the need to induce superior innovation through “Schumpeterian” effects. He quotes IPART (1999):

*“Generally, incentives to pursue efficiency gains will be strongest where the Network Service Providers (NSP) retain the largest amount of revenue over the longest period of time.”*

Professor Johns concludes that the cost of service ‘building block’ model has serious disadvantages, including effects on investment, efficiency and for consumers. For example:

*“There is in fact a danger that the regulatory approach proposed by the **ORG** will lead to less capital expenditure in the Victorian electricity supply industry than would be efficient from the community viewpoint.”*

Johns also deals with the dangers of micro-management by the regulator under cost of service, a risk he sees as the *“Achilles heel of the cost-based form of regulation”*. He also refers to the principal-agent problem in such regulation, where the objectives of the government or the community at large (the principal) in setting up the regulatory framework are ignored and superseded by the objectives of the regulatory authority (the agent).

Professor Johns submits that incentive approaches such as full glide path and total factor productivity should be applied.

### 3.3 Professor Stephen King

Professor Stephen King (University of Melbourne) is an adviser to the **ACCC** and has published several commentaries on Australian regulation. In discussing the building block model, he speaks of *“intrusive hands-on regulation”* and argues that this approach *“disguised under a more acceptable name”* has involved *“reinventing the worst aspects of United States rate of return regulation”*. He concludes that this approach *“... has brought together the worst aspects of overseas experience to create a sterile framework that threatens to undermine the benefits of micro economic reform”*. (King 2000)

### 3.4 UK regulators/economists

Professors Stephen Littlechild, Michael Beesley and Martin Cave are respected economists or former regulators who have made submissions or presentations to utility reviews in Australia. Each of their contributions echoes the points made above. For example, Professor Cave (Brunel University), on behalf of the Victorian Department of Treasury and Finance, has found that the building block model could have a major adverse effect on incentives for efficiency. The Department itself has **also** submitted that it does not believe that the building block model is consistent with light handed regulation and pointing out the merits of switching to external “output orientated (sic)” benchmarks.

### 3.5 US economists

Professors Sandford Berg (Florida) and Jerry Houseman (MIT) are also respected United States commentators on regulation who have made presentations or statements on Australian regulation during visits here. Again, their comments are much the same. For example, Professor Houseman in a presentation to the ACCC on the cost based regulation being applied here refers to the loss of dynamic efficiency (ACCC 15 July 1997):

*“A cost based access fee would discourage dynamic efficiency for two reasons. First, a new entrant would not invest at efficient levels because cost based regulation does not reward risk taking for new services, Services which do not succeed never earn back their investment, However, services which do succeed only earn back their costs.*

*The second reason why cost based regulation decreases dynamic efficiency is that firms do not have the economic incentive to increase productivity and lower costs through time. If firms lower their costs it leads to a reduction in their permitted access charges. To the extent that the regulator does its job correctly it will remove all incentive for productivity gain.”*

In the same way, Professor Berg quoted at an ACCC conference (Melbourne, November 1997):

*“ ... command and control mechanisms comprising cost of service regulation tools are at best blunt and crude, preventing the worst abuses, but not sharp enough to encourage anything better. An incentive approach promises more.”*

### 3.6 Financial sector

A number of finance academics, finance houses, investment groups and credit-rating agencies have also made submissions to price and access reviews or have published commentaries elsewhere. These have expressed concern about the interpretation by regulators of their objectives and the form of regulation being implemented, pointing to adverse consequences for investment and economic development in the jurisdiction concerned and for Australia. For example, Standard and Poor's (see Credit Focus, Feb 1999) notes the building block approach will increase regulatory risk and the cost of capital and could result in the downgrading of credit ratings and inefficient hedging practices. As another example, SG Hambros, part of the world's fourth largest bank, predicted that there would be:

- “– increased cost of equity capital;
- “– increased cost of debt capital by potential credit agency changes to credit ratings and by more restrictive debt covenants; and
- “– sovereign risk implications, which may diminish future investment by the private sector in regulated assets, in Victoria and Australia.” (SG Hambros, Submission to 2001 EDPR, p4)

### 3.7 Productivity Commission

The Productivity Commission’s Position Paper on the Review of the National Access Regime (PC 2001) was supportive of the concept of moving from cost or CPI-X forms of regulation to productivity based regulation, noting in particular that:

*‘The pricing principles in Part IIIA [of the Trade Practices Act] should specify that access prices should:*

- *generate revenue across a facility’s regulated services as a whole that is at least sufficient to meet the efficient long-run costs of providing access to these services, including a return on investment commensurate with the risks involved;*
- *not be so far above costs as to detract significantly from efficient use of services and investment in related markets;*
- *encourage multi-part tariffs and allow price discrimination when it aids efficiency; and*
- *not allow a vertically integrated access provider to set terms and conditions that discriminate in favour of its downstream operations, unless the cost of providing access to other operators is higher.’*

*“In relation to the level of prices, attempts to be too precise in removing the potential for service providers to earn monopoly rents (aligning prices with costs) carries significant risk.”*

*“Ultimately, the approach taken to achieve an acceptable level and structure of prices depends on the instruments available to regulators and the way they can be applied. Because the structure of prices is so important, instruments which allow service providers to develop their own price structures are likely to be preferable to those where the regulator is required to determine the structure. While the scope to offer such ‘freedom’ will vary from case to case, even where more explicit price control is necessary, those pricing arrangements should still attempt to provide incentives for facility owners to improve efficiency.”*

*“ ... from a future policy perspective, a more fertile ground for discussion is the scope for price oversight and incentive regulation — such as non cost-based price caps — to supplant or augment cost-based price setting.”*

*“The need to forecast future costs, and to validate proposed capital expenditure, could lead to the regulator having a significant influence over the running of the business. ... Such outcomes illustrate the tendency for price caps based on the building block approach to merge into rate of return regulation. Subsequent efforts of the regulator to address the downside of rate of return regulation — incentives to ‘goldplate’ assets and pad costs — can in turn lead to even more intrusive regulation of the sort noted by APAC (Australia Pacific Airports Corporation). In other words, the regulation can feed off itself.”*



*“While Australian access regimes have relied heavily on building block approaches, productivity-based approaches are well established in other areas of regulation.”*

*“As a result of past building block exercises, cost-bases should have been already established for most essential infrastructure services in Australia. The Commission considers that there would be significant benefits in taking advantage of this data and relying to a greater extent on productivity-based approaches to capping prices for access to that infrastructure.”*

*“Greater use of productivity-based approaches for setting price caps governing access to essential infrastructure services would be desirable. Regulators should give priority to developing the external productivity benchmarks necessary to implement such approaches.”*

The Productivity Commission’s comments clearly indicate that there is a shifting trend with respect to thought on the appropriate form of regulation, and that regulators should be considering the benefits of different approaches to regulation rather than entrenching the current cost of service approach.

### 3.8 IPART

IPART itself has recognised the problems of command and control regulation:

*“The history of intrusive cost-plus regulation is replete with examples of heavily regulated utilities that exhibit low levels of efficiency, poor investment practices and below average service performance. Both theory and experience indicate that repeated frequent confiscation of the benefits of efficiency improvements combined with uncertainty over future regulatory actions will lead to poor performance and welfare loss.” (IPART 1999)*

As IPART makes clear, incentive regulation should seek to emulate competitive processes and outcomes:

*“The competitive process is dynamic and its specific outcomes are unforecastable. **No** regulator can accurately assess the levels of efficiency or service an industry is capable of over time. Hence, the regulatory framework should aim to create conditions which encourage the industry itself responding to the incentives it faces to move towards its continually shifting performance frontier.” (IPART 1999)*

IPART selects total factor productivity, or glide pathing and external benchmarking as superior forms of regulation. In another paper IPART supports this approach in the following terms:

*“A glide path provides strong incentives for **NSPs** to pursue efficiency gains by allowing them to retain a proportion of any gains in the subsequent regulatory period without distinguishing between management-induced and windfall gains.”*

*“The glide path approach exemplifies the Tribunal’s current views in respect of the most appropriate regulatory approach to ‘benefit sharing’.”*

#### 4. THE NEED FOR A CHANGE IN THE FORM OF REGULATION

In making determinations in relation to the form of regulation for electricity distribution, regulators face the fundamental question of how to best meet the efficiency objectives of the Code.

The above comments clearly illustrate that the Code's efficiency objectives are being compromised by a strict adherence to the CPI-X cost of service approach to regulation. In particular, the current regulatory approach:

- is neither efficient nor cost-effective, as in particular it ignores the benefits of dynamic efficiency, with high compliance costs for regulated entities;
- is not truly incentive based, as regulators dictate the "appropriate" level of costs for the business, with little if any scope for the regulated entity to pursue genuine innovations; and
- does not act to create an environment which fosters an efficient level of investment, with incentives to invest stifled by the intrusive nature of the cost of service approach and the limitation of returns on innovative investment to the bare minimum allowed by the regulator.

Perhaps the only one of the Code's efficiency objectives that is being met is the prevention of monopoly rent extraction (although at the expense of several other critical objectives that appear to have been given too little weight by regulators to date). In particular, regulators appear to have adopted the view that any profits in excess of a 'normal' rate of return constitute monopoly rents. In adopting such a view there is no scope for higher profits to reflect genuine, consumer-desired innovation in service delivery – which appears to be directly in contrast with the Code's objectives in relation to incentives and investment, and which can be fully consistent with even lower prices to consumers.

The Code's objectives could collectively be considered as the maximisation of social welfare or, as policy makers have put it, to maximise the long-term interests of consumers. Long-term interests clearly include those derived from the encouragement of growth, innovation and diversity of choice, as well as lower prices to end users. Efficiency is therefore best achieved where the role of the regulator is in fostering those processes and outcomes, but not determining market structures, investment levels, technological choices or what should be supplied to consumers.

What is apparent from the preceding comments is that the Code's efficiency objectives are not being fully met, and as a result, there is a growing view among those in the regulatory profession that the current cost of service approach to regulation is flawed, and that alternative approaches need to be more fully explored.

#### 5. AN ALTERNATIVE FORM OF REGULATION

This chapter presents an alternative form of regulation that better achieves the objectives of policy and the principles of good regulation: that is, true incentive regulation.

'True' incentive regulation contains several options but an essential feature is that it is price and not cost based. To the extent possible, it attempts to 'mimic' effective or workable competition in imperfect markets, simulating market pressures to cut costs and

incentives to foster the possibility of firms earning innovatory gains. Over time, the system should ensure that all the benefits utilities are reaping from their endeavours are steadily passed to consumers, replicating the persistent Schumpeterian 'gales'. Such regulation should support the accurate reporting of information to the regulator.

## 5.1 Price caps using price based X-factors

Price caps, with the strong proviso that they are properly applied, can be a useful form of true incentive regulation when the X in CPI-X is properly determined (ie. it relates to price and is totally divorced from the total costs of the firm). This approach is therefore consistent with the requirements of the Code to apply a CPI-X regime. The X is usually determined as the expected productivity of the individual firm. IPART itself (1999) refers to a variation suggested by United Energy to IPART and ORG reviews, based on work by Laurits R. Christensen Associates. Here, existing prices are indexed to the long term trend rate of productivity growth for the industry, relative to that of the economy generally (called the total factor productivity - TFP - model here).

The TFP model has distinct advantages over simple price caps, using industry rather than individual firm productivity. IPART notes the Canadian Radio, Television and Telecommunications Commission (CRTC) as commenting in its **1997** regulatory decision that:

*"... an X factor should be based on data that are independent of the actions of any one individual company ... the use of an industry-wide X-factor has major benefits to consumers and the general economy as it will enhance companies' incentives to increase their efficiency. Further, the Commission notes that the use of an industry-wide X-factor rewards those companies that have achieved above-average productivity gains in the past and provides an appropriate incentive to those companies that have had below-average productivity in the past."*

As IPART reports, the arguments in favour of the approach are:

- " - it has clear, unambiguous and powerful incentive effects;*
- it has a theoretical foundation and applies objective measures that are transparently based on external data rather than regulatory judgements; and*
- it creates minimal regulatory risk and has low transaction costs, and low administration costs." (p 16)*

IPART also notes that:

*"The focus on industry wide measures removes most, if not all, of the direct scrutiny of individual company costs. In theory, price reviews become an overview in updating TFP estimates in accordance with agreed methodology and data, with perhaps some consideration of external efficiency benchmarks. No detailed analysis of projection of individual company costs or profits occurs. Questions of cost allocation, differential treatment of operating and capital expenditure, the treatment of windfall gains and losses, and the identification of management controlled savings do not arise." (p 15)*

As noted by IPART, TFP regulation has been used extensively in the United States in telecommunication networks, railways and post and is now becoming more widely used in electricity and gas (see Kaufmann and Lowry 1998).

Kaufmann considers that the TFP approach offers strong prospects of achieving all of the regulatory objectives, with lower regulatory risk and minimal administrative costs. Much stronger pressures and incentives apply for improving performance, with managers focusing on what they should be concerned with – cost containment, product development, customer service and appropriate investment – and not on the regulator. Efficiency should also improve through economies of scale and of scope and greater technological change. Superior performances will benefit both customers and investors through lower prices than under the cost of service approach, and with higher profits and dividends.

## 5.2 Glide paths

Glide path regulation encompasses external benchmarking (based on domestic or international best practice) to determine an appropriate price target, with a transition from prevailing prices to the identified targets. The time profile of the glide needs to be of sufficient duration to ensure that potential gains from innovation and efficiency improvements are realised, and to recognise that best practice is itself a moving target.

The claimed advantages of the glide path include:

- it is simple, symmetrical and certain, with low costs of administration to companies and taxpayers;
- it provides strong incentives for continuous efficiency and innovatory gains from both directions (carrot and the stick of having to achieve best practice) and there are no perverse incentives. This reduces prices in the longer term;
- it has a solid theoretical foundation, mimicking effective competition in imperfect markets;
- it only includes the extraction of proven efficiencies (proven in the sense that they have already been achieved by overseas firms when the international benchmark is set);
- firms are induced to manage all risks over the transition period from all exogenous variables (other than force majeure);
- it avoids price shocks for consumers and revenue shocks for investors, resulting in higher credit ratings and a lower cost of capital;
- it solves the fundamental regulatory problem of information asymmetry;
- it avoids asymmetry between regulated companies and for individual companies over time and any perceived unfairness in regulatory decisions. It helps guarantee regulatory stability and eliminates gaming; and
- it can accommodate changing consumer preferences.

## 5.3 Price/service offerings

During the 2001-2005 Electricity Distribution Price Review in Victoria, United Energy Limited (UEL) made a submission to the Office of the Regulator-General (ORG) described by a major social welfare group as “*as a decade ahead of anything else in the world*”. In its submission, UEL presented three alternative options to the ORG which involved trade-offs between price and level or quality of service offered to customers. Two of these were designed in consultation with customer and community groups, user industries, local councils and the like, as well as UEL’s own Customer Consultative Committee. The ‘Regulatory Base’ option provided for price and quality commensurate with the command and control approach favoured by the **ORG**. The other two ‘Customer Value’ and ‘Customer Premium’ options proposed enhanced service offerings designed in the consultations and tied to incentive based regulation.

These three options became known colloquially in terms of types of motor vehicles: the Lada, Holden Commodore and the Mercedes-Benz respectively.

The Customer Value and Premium options depended on a Regulatory Contract which guaranteed to deliver a wide range of improved services, with the opportunity for UEL to gain a financial benefit or suffer a financial penalty based on its ability to perform. The range and degree of improved services went beyond anything yet seen in Australia. For example, the options proposed improvements in supply reliability to world’s best practice as assessed by Pacific Economics Group. This was expected to increase the competitiveness of user industries and to lay the foundation for the needs of new technology industries. For instance, the target for minutes off supply per customer a year would be 52 minutes under the Customer Premium option, down from the standard of around 500 under public ownership and from around 200 in recent times under private ownership.

Another key element was the undergrounding of key areas of the network, improving the visual landscape, increasing safety and property values and having many other beneficial effects. This was the most strongly supported element, with over 80% of customers ‘strongly’ supporting the initiative. Other key areas of benefit to customers included:

- enhanced environmental benefits through a range of programs;
- enhancement of guaranteed service levels to world’s best practice;
- initiatives with local government to support regional economic development, safety and security programs;
- a complex hardship policy designed to ‘fix’ the many problems and issues raised by community welfare groups in an efficient and equitable way; and
- innovative tariff structures.

The UEL approach was designed to emulate what happens in real world imperfectly competitive markets, where companies are induced and driven to achieve continuous improvement to satisfy customer preferences at best-in-class standards. According to UEL, it was also designed to build a major customer focused cultural change within the organisation. The penalty for any failure to perform in the options was high - \$10 million and \$20 million respectively for the Customer Value and Premium options.

On price, the Regulatory Base option provided for a small price decrease over time. The Customer Value Option provided for no price increases, with commensurate increases in service levels – an increase in the quality of service being essentially equivalent to a reduction in price. Lower prices were expected over time, including from better management of the system and optimal use of the network. The Customer Premium required a small increase in price, but also committed to a much higher rate of investment in undergrounding and other benefits.

As remarked earlier, the great majority of UEL's customers strongly favoured either the Value or Premium options, with only a small number preferring the Regulatory Base.

ENERGEX also wishes to develop a competitive, innovative and customer focused approach to regulation. This may not suit other regulated firms in energy or elsewhere or their customers. However, there is no obvious reason why regulators should forbid such developments which are clearly achieving the objectives of the Hilmer reforms and of CoAG. That said, UEL's pioneering approach is attracting more attention. For instance, the ESAA reported on 28 May 2001 that Energy Australia conducted a \$1 million survey of customers which showed that they are prepared to pay significantly more for greater system reliability. Energy Australia is quoted as saying that the present regulatory approach militates against such improvements.

Of course there would be 'excess' to normal profits earned under UEL's approach by regulated companies that perform well against the standards in the Regulatory Contract. These are not monopoly rents in the usual sense but merely the necessary reward for achievement and innovation. Moreover, they would be progressively passed on to consumers as the standards become more rigorous over time, reaching and extending the production possibility frontier of best practice. On the other hand, those that fail to perform against the standards would pay a penalty, as occurs in any market.

Customers would be involved in the initial construction of the options and the sorts of services required. They would also have a 'vote' in deciding which option is to be preferred on presentation of the price-service offerings to the regulator. That is, they would have a choice about price-quality trade offs in the same way as buyers of cars. Moreover, customers will act as an important source of information to regulators in the monitoring of performance against the Regulatory Contract.

### 5.3 Prices oversight

A final alternative regulatory option is prices oversight. Prices oversight in Australia is usually conducted under the *Prices Surveillance Act 1993* for companies which hold substantial market power.

When a company is declared by the Minister for 'surveillance', the regulator is required to have regard to a number of matters, including the need to maintain investment and employment, to discourage excessive cost increases from wage increases and to discourage a company abusing market power. What usually occurs is that the starting point is prevailing prices, with price increases limited to unit cost increases subject to the above matters and certain Ministerial Directions.

Major companies (about 70 at one point) operated successfully under surveillance and almost all have now been 'de-declared' because they are now pricing efficiently or contestability has improved. When a company is under surveillance, it tends to focus on driving costs down by increasing efficiency. The regulator applies publicly stated "fair and efficient pricing principles" but does not fix profits or attempts to drive prices down to (more efficient) costs in the **short** term. Indeed, as previously noted, successive governments from both sides have been scrupulous to ensure that there is no question of controlling profits under the Act.

Price caps are also possible under surveillance and are, in fact, identical to true incentive regulation when properly applied. For example, the wholesale price of petroleum products in Australia was capped under the Act at international benchmark prices, with an

allowance for distribution costs at 'best practice' rates. Australian wholesale prices consequently averaged around the third lowest in western countries either before or after tax, despite the small size of markets within Australia and the limited economies of scale.

Monitoring (either formal under the Act or informal) has also been applied to a range of companies and industries in transition (eg glass bottles), where reports are made to the Minister on the progress made by a company in emulating the outcomes of effective competition in imperfectly competitive markets. There is no regulatory involvement on prices, but the Minister holds the power to impose surveillance if necessary.

Monitoring relies on public exposure and the threat of surveillance being introduced. The **BIE** (1995) has argued that such oversight may be preferable to all other forms in inducing efficient and fair prices by creating pressures of transparency and public scrutiny.

The Hilmer Committee was strongly of the view that only prices oversight (especially monitoring) would be necessary once the structural reforms had been implemented. Professor Fred Hilmer is still of that view (see *Weekend Australian*, 18-19 November 2000), stating that, if implemented, all the "... arguments will stop" on parameters developed by the various regulatory bodies.

A recent decision of the Productivity Commission on Price Regulation of Airport Services (2001) recommended that price regulation of Australia's major airports should be replaced by a five year probationary period of monitoring, with no direct price control over that period. The report states that changing from price caps and regulation to monitoring would promote commercial relationships between airport operators and airlines and avoid the currently high level of regulatory involvement.

## 6. CONCLUSIONS

Chart 1 depicts a range of selected forms of regulation. There are other forms of regulation not covered (eg yardstick, franchise bidding, sliding scales) and the relative ranking of those selected is not precise, but this is not important to the argument.

The chart shows a disconnection between command and control and 'true' incentive regulation. It is sometimes claimed there is a continuum between these two approaches but this is incorrect. All command and control forms are essentially bottom-up from cost whereas 'true' incentive regulation is top-down or price-based. That is, prices are de-linked from the costs of individual regulated firms.

In summary, ENERGEX is of the view that:

- the Code envisages light-handed regulation of electricity distribution, with discretion to jurisdictional regulators to determine its precise form;
- the current cost of service approach to regulation is flawed in a number of key respects, and is not meeting the efficiency objectives of the Code; and
- adoption of true incentive regulation is likely to satisfy all of the pricing objectives of the Code and to achieve the principles of good regulation, in line with the growing support for such an approach as expressed by market experts, regulators and research bodies.

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ENERGEX therefore strongly advocates greater exploration of options for true incentive regulation, with a view to moving from a cost of service approach to a true incentive based approach along the lines of the options discussed in this submission.

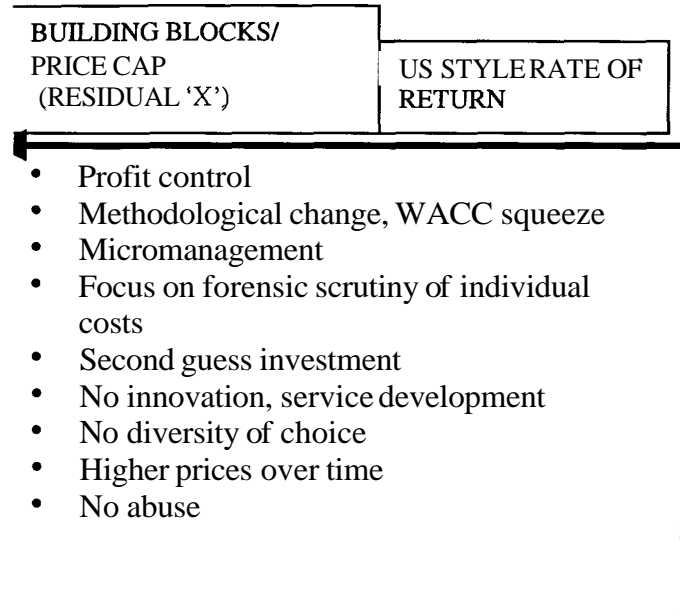




# Chart 1: Selected Forms of Regulation

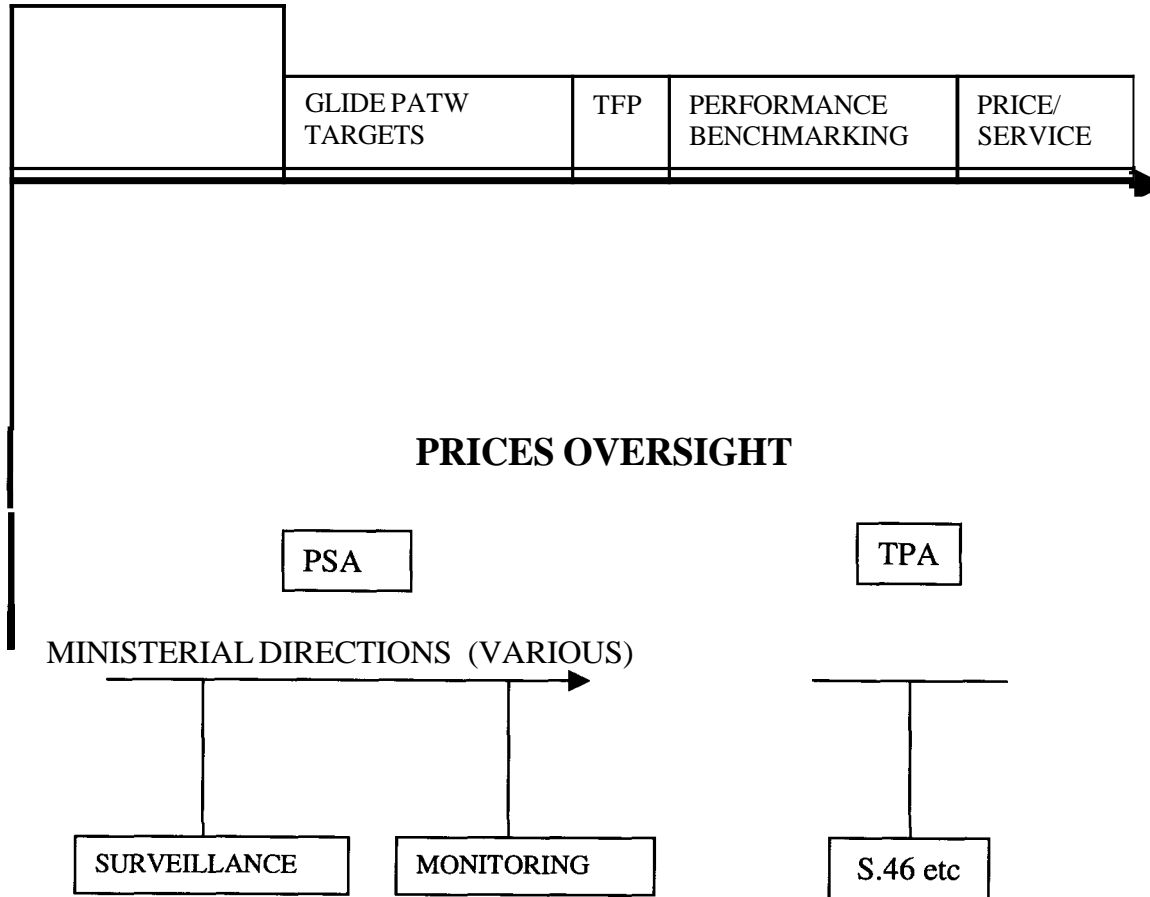
## HEAVY HANDED

### COMMAND & CONTROL Cost of service/rate of return



## LIGHT HANDED

### “TRUE” INCENTIVE REGULATION



## REFERENCES

- Averch, H, and Johnson, L, "*Behaviour of the firm under regulatory constraint*"; AER, vol 60, 1962.
- Beesley, M A, "*RPI-X Principles and their Application to Gas*"; Text of Regulation Series V Lecture, 1995.
- Berg, S V, "*Incentive Regulation*", paper presented to ACCC Utility Training Program, Melbourne, November 1997.
- Bureau of Industry Economics, "*Issues in Infrastructure Pricing*"; August 1995.
- Caves, M, "*The Glidepath and Benchmarking*"; Middlesex, 1999.
- Caves, M, "*Recent Developments in the Regulation of Former Nationalised Industries*"; Government Economic Service Working Paper No 114, Hay Treasury, London, August 1991.
- Gans, J, and Williams, P, "*Efficient Investment Pricing Rules and Access Regulation*"; University of Melbourne, July 1998.
- Gans, J, "*Regulating Private Infrastructure Investment: Optimal Pricing for Access to Essential Facilities*"; University of Melbourne, July 2000.
- Gans, J S and King S P, "*CPI-X versus Rate of Return Regulation: An Evaluation of the ORG's Prices for Electricity Distribution in Victoria*"; University of Melbourne, October 2000.
- Gray, P, "*Utility Regulators – Supporting Nascent Institutions in the Developing World*", World Bank Network, September 1998.
- Independent Pricing and Regulatory Tribunal of NSW "*Regulation of Electricity Service Providers – Incentives and Principles for Regulation*"; Sydney, 1999.
- Kaufmann, L and Lowry, M N, "*Review of Distribution Price Controls in Victoria: Comments on NERA's Proposed Approach and the Regulator-General's Consultation Paper*", Laurits R Christensen Associates, September 1998.
- Kaufmann, L and Lowry, M N, "*Updating Price Controls for Victoria's Power Distributors: Analysis and Options*"; Laurits R Christensen Associates, September 1997.
- Kaufmann, L, and Lowry, M N, "*Independent Benchmarks and Effective Utility Regulation*"; Pacific Economics Group, Wisconsin, 2000.
- King, S, and Maddock, R, "*Regulation by Negotiation: a strategic analysis of Australia's essential facility access regulation*"; March 1997.
- King, S, "*Access Pricing*"; IPART, Research Paper No 3, Feb 1995.
- King, S P, "*Incentive Regulation in Australia – a hybrid approach?*"; University of Melbourne, September 2000.

- KPMG, *"Incentive Regulation – Australian Experience to Date"*, Sydney, February 2000.
- KPMG, *"Response to Consultation Paper No 3"*, on behalf of Energy Projects Division of Treasury and Finance, March 1999.
- Laffont, J, and Tirole, J, *'The Regulation of Multi-Product Firms'*; Journal of Public Economics, 43, 1990.
- Laffont, J, and Tirole, J, *"Á Theory of Incentives in Regulation and Procurement"*: MIT Press, Cambridge.
- Larson, A and Lehman, D, *"Essentiality, Efficiency and the Efficient Component Pricing Rule"*, Journal of Regulatory Economics, 12, 1997.
- Lee, T, *"The Marriage of the Three Heads of Competition Policy – Trade Practices, Prices and Microeconomic (Natural Monopoly) Reform: Did the Hilmer Committee get it Right?"* Mimeo, University of Melbourne, 1994.
- Productivity Commission, Review of the National Access Regime: Position Paper, March 2001.
- Schumpeter, J A, *"Capitalism, Socialism and Democracy"*, 1943.
- S G Hambros, Submission to the Office of the Regulator-General, Consultation Paper No 2, 22 March 1999.
- United Energy: Submissions to the Office of the Regulator-General, Various, 1999 & 2000.