Submission of

The Consumer Law Centre of the ACT

and

The ACT Council of Social Service

On the discussion paper “Improving User Participation in the Australian Energy Market”

April 2004

Foreword

This submission has been prepared on behalf of the Consumer Law Centre of the ACT (CLC) and the ACT Council of Social Service Inc (ACTCOSS). Our organisations have an important consumer interest in the issue of electricity prices and all essential services provision, particularly to low income consumers.

The CLC was established in 2002. It is co-located with Care Inc Financial Counselling Service, the main provider of financial counselling and related services in the ACT and region since 1983. The CLC is an independent community legal centre funded by the ACT Government to provide free legal assistance and advice to vulnerable and disadvantaged consumers in a wide range of areas, including general consumer and fair trading matters as well as consumer credit, utilities and telecommunications. The CLC also plays an active role in providing consumer education, and in pursuing regulatory and market-place reforms. By advocating on behalf of and facilitating access to justice for disadvantaged consumers, the CLC aims to ensure a fair market place for all ACT consumers.

The ACT Council of Social Service Inc (ACTCOSS) is the peak representative body for not-for-profit community organisations and disadvantaged and low-income citizens of the Territory. ACTCOSS is a member of the nationwide COSS network, made up of each of the state Councils and the national body, the Australian Council of Social Service (ACOSS). ACTCOSS has the twin roles of representation and advocacy. The Council's objectives are the representation of disadvantaged people, the promotion of equitable social policy, and the development of a professional, cohesive and effective community sector. The membership of the Council includes the majority of community based service providers in the social welfare area, a range of community associations and networks, self-help and consumer groups, and interested individuals.

CLC/ACTCOSS submission on improving user participation in the Australian energy market.

Introduction

This submission reflects the structure of paper "Improving User Participation in the Australian Energy Market" written by the Ministerial Council on Energy Standing Committee of Officials.

We commence by outlining our general concern to see that energy costs do not impose a harsh burden on Australian households, particularly low income households.

We then comment in more detail on the three sections of the paper – demand-side responses, interval meters and retail pricing.

General concerns

For most Australians domestic energy costs have been falling, both in real (inflation-adjusted terms) and as a proportion of household income. Over the last 25 years real energy prices have been reasonably stable as real average incomes have risen, resulting in a decreasing share of income devoted to energy costs.

Table 1 - Household domestic fuel expenditure ($/week)

	Current prices	Constant (2003) prices	Percentage of household income
1984	10.56	22.42	2.3
1993-94	16.77	21.31	2.3
1998-99	17.87	20.56	2.0

Source – derived from ABS Household Expenditure Surveys and CPI series

Such gross figures, however, mask the experience of those in lower income households. For them energy costs have been absorbing a much greater share of their income.

Table 2 – electricity and other energy costs as percentage of household income

	Lowest income 20%		Highest income 20%	
	1984	1998-99	1984	1998-99
Electricity	4.6	5.9	1.1	0.8
Other domestic fuel	1.6	2.2	0.4	0.3
Total	6.2	8.1	1.5	1.2

Source: Derived from ABS Household Expenditure Surveys 1984 and 1998-99

It is reasonable to assume that, as more stress is placed on energy sources, the future will see real price rises for energy, with a resulting stress on all households. We also assume that any policies which can control total energy demand and use, be they by way of market forces or regulatory interventions, will help keep such price rises in check.

We therefore assert two general policy principles:

(1) We support policies directed to energy conservation, provided these are applied generally across the whole energy market.

(2) We have reservations about the longer-term consequences of privatization of energy networks, because of the commercial incentives for making profits through market growth.

Encouragement of demand side responses

If demand side mechanisms, either "pay-as-bid" or aggregation, can be effective in moderating the growth in energy use, then they are to be welcomed.

There are two reservations, however.

First, we have seen no analysis of the transaction costs associated with these mechanisms, particularly if they involve the growth of aggregation intermediaries. (Enron comes to mind as one of the more expensive adventures in energy intermediary markets.) Utility deregulation and privatization were intended to remove some of the overhead burdens associated with the old state-owned vertically integrated monopolies. But we are now witnessing the growth of more private sector overheads in their place.

Second, we do not see deemed customer profiles (as used in the UK) as an alternative to more direct household involvement in electricity markets. Indeed, from evidence presented to the consultation in Melbourne, it appears that there may be only limited knowledge about households' energy use profiles.

Interval meters

There are pockets of resistance to significant changes in metering technology. See, for example, a submission from AGL opposing the mandatory introduction of interval meters in Victoria – a submission which stresses the costs but not the benefits of improved metering in households.[1] The externally-mounted accumulation meter with its intricate clockwork mechanisms has become almost as iconic as the Hills Hoist.

1. AGL Electricity Networks "Installing Interval Meters for Electricity Customers" – Costs and Benefits, 28 February 2003
http://www.esc.vic.gov.au/apps/page/user/pdf/IMRO_AGL_NetworksSub28Feb03.pdf

A museum piece

There are two benefits in improved energy metering. One is the straightforward saving in labour-intensive metering costs, assuming meters are connected to telecommunications lines for central monitoring.

The other is more significant – the contribution that proper meters can make to a responsive energy market. To allow such a market to develop we suggest the following specifications for interval meters:

- a single meter to be used for all three basic utilities (gas, water and electricity), and for the option for customers to monitor gas prices in similar units (kWh) as electricity[2];
- display of consumption and price data;
- internal mounting;
- interrogation and control through remote monitoring – telecommunications lines, power lines or wireless technologies;
- capacity to link to "smart" appliances – e.g. to turn off freezers or hot water service systems for certain periods, or to delay the start of certain appliances[3];
- capacity to send consumer warnings about unusual consumption patterns (e.g. indicating a leaking gas pipe, or an appliance left on for an extended period.)

Some parties will no doubt respond to the effect that poor households are unlikely to have "smart" appliances, and will not necessarily have the computational capacity to make full use of such advanced technology.

This is a short-term view of metering. Undoubtedly the main beneficiaries initially will be more prosperous households, who can afford "smart" appliances and who have the capacity to make price comparisons and respond appropriately. But such activities, known by economists as "market perfecting" activities, provide benefits to all households. Markets are kept honest by the presence of fastidious consumers.

More significantly, if middle-class households are equipped to behave more rationally in energy markets, then total demand, particularly peak demand, will be better controlled, with lower energy costs all around, and saving in capital outlays as loads are spread more evenly.

And, in time, "smart" appliances will become items of mass consumption, not confined to the rich.

There is a legitimate concern about the cost of interval meters, but these costs, which are once off in nature, need to be seen in perspective; the average household already spends $1000 a year on domestic energy and lower income (lowest 20 percent) households spend around

2. Because of issues concerning varying quality and combustion efficiencies there are difficulties in achieving precision, but standardized factors could be developed.

3. There are clearly issues to do with noise in relation to certain appliances designed to operate in off-peak times.

$750 a year. Even quite small savings in these outlays will acquit the cost of interval metering over a reasonable period. Interval meters are presently expensive, but once standards can be agreed upon, and agreement is reached on mass installation, the price should fall considerably; it is hard to imagine that the long run production cost of electronic meters could be higher than the cost of the present intricate mechanical accumulation meters.

There is also the notion expressed in the paper that "small consumers are relatively unresponsive to a change in price" (Page 12). This is a very categorical (and unsourced) statement. The Productivity Commission, citing international studies, has found that over the longer run there is a reasonable demand side-response among domestic customers. Australian studies show lower elasticity, but these studies are based on the existing primitive metering systems in Australian households.[4]

Similarly, in the AGL paper, there are the suggestions that customers will find interval meters confusing, and that there will be high costs in processing the data coming from interval meters.[5] On the former suggestion, it is difficult to conclude that ignorance about consumption and price is preferable to confusion; accumulation meters are very difficult to read. And on the latter suggestion, it is hard to believe that the costs could be any greater than they are now – in a system reliant on physical inspection of meters. Once systems are established the data processing and billing costs should be no greater than they are at present.

In all, we find industry objections (including those from state governments which own power utilities) to interval metering to be unconvincing – particularly when there are clear commercial benefits from customers being unaware of their consumption on a day-to-day basis.

There are clearly issues to be resolved with interval metering – it would be undesirable for individual jurisdictions to roll out interval meters before there is agreement on national standards and conventions on communication and linkage to smart appliances. But at present the utilities seem to be procrastinating rather than planning; the MCO paper states that most states have not even studied the introduction of interval meters for domestic users, and where they are available, such as in Western Australia, there is the risk that some consumers will be locked into a short-lived technology.

Retail prices

We are concerned at the implication in the paper and in the statements in the oral briefings that governments may see price regulation as a transitory measure pending the introduction of full retail contestability.

Price regulation, into the foreseeable future, is necessary for two reasons:

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4. See Page 36 in Chris Sayers and Dianne Shields *Electricity Prices and Cost Factors* (Productivity Commission Staff Research Paper August 2001), and Page 3 in *The price elasticity of demand for electricity in NEM regions* (National Institute of Economics and Industry Research, Clifton Hill, 2002.)

5. AGL *op cit.*

(1) To overcome fundamental market failures.

(2) To allow for an equitable distribution of the impact of fixed costs in energy supply.

We address these issues in detail below, before commenting on the desired form of price regulation.

Fundamental market failures

In the previous section we covered improved metering. This is a necessary but certainly not a sufficient condition for efficient operation of an energy market. Some of the other market failures we identify include:

High search and switching costs – even though they are providing fungible, undifferentiated products, utility companies are able to make it difficult for consumers to make price comparisons. Complex and frequently-changing tariff structures and bundling of non-energy products make for high search costs. Switching costs involve changing payment arrangements, and costs in the utility firms themselves which are ultimately passed through to customers. Regulations to require standardized pricing data, a prohibition of bundling (other than with related energy products), and provision of a price comparison website, may go some way to easing these costs.

Lack of control over energy use – particularly in rented accommodation. Rental transactions generally do not take energy costs into account. Landlords therefore cannot expect to command a rental premium for providing energy-efficient premises. In such markets equilibrium tends to occur around the poorest level of quality – a manifestation of Akerlof's "market for lemons".[6] Regulations requiring landlords (public and private) to provide minimum standards of insulation and energy-efficient appliances can help overcome this market failure. (Provision of information alone is inadequate, because the bargaining power of the poor in rental contracts is very limited.)

High domestic discount rates – investment in energy-saving appliances and insulation can make sense for households with a reasonably low discount rate. Those who are struggling to match outlays and income face extremely high discount rates – a credit card rate of 15 percent if they are lucky, or a payday lender's usurious rates if they are unlucky.

Weak bargaining power – retail consumers are relatively weak in a market where there are many players of hugely varying size, right up to businesses such as aluminium smelters. This is not common in markets – in most markets consumers are not competing with giant customers. One of the consequences of electricity deregulation has been a re-balancing of the prices charged to domestic and business customers. The ratio of average domestic to large business charges is shown in Table 3.

6. The consequences of consumers being unable to judge quality in markets are described by George Akerlof "The Market for Lemons: Quality Uncertainty and the Market Mechanism *Quarterly Journal of Economics* Vol 84 May 1970.

Table 3 – Ratio of domestic to large business electricity prices (domestic as percentage of large business)

	1996-97	2002-03
NSW	115	165
Vic	155	222
Qld	118	157
SA	142	199
WA	130	150
Tas	126	177
ACT	80	132

Source: Derived from Tables A1 and A2 in *Electricity Prices in Australia, 2002-03* ESAA 2003.

The conventional explanation for such price dispersion is that it represents cost differences. Some large businesses, for example, receive electricity at high voltage, and use their own transformers to step down the voltage, thus bearing some of the distribution costs and losses. Some process industries such as aluminium can accept temporary shut down to help electricity companies manage their loads. Many businesses such as retail establishments have a steady daytime load without calling on peak capacity – domestic consumers place high evening peak loads on electricity grids, requiring electricity authorities to maintain a large amount of capacity which is unused for most of the day.

Against these claims it is worth remembering that Australia has become more interconnected – after all that is what a national electricity market is all about. Domestic load balancing is easier and therefore less costly in a large grid with different climate and time zones. And not all industrial users are gentle on electricity grids – large motors and electric furnaces can place heavy transient loads on electrical systems. Some industrial users have loads with low power factors. And some commercial users, such as hotels, have load patterns that are very similar to domestic patterns.

Australia's wide price dispersion does not align with the much lower price dispersion seen in USA energy markets, where there is only around a five percent difference between residential and commercial tariffs.[7]

Understandably, being better-informed and having more bargaining power, large businesses exhibit more price sensitivity. Pricing theory suggests that one charges higher prices to those customers with lower elasticity (being more captive) and lower prices to customers with higher elasticity (being more likely to shop elsewhere).

As a first step it may be necessary for there to be a legislative requirement for electricity utilities to reveal their pricing policies and charges to large commercial customers. And a slightly heavier form of regulation would be to prohibit price discrimination in energy supply, unless there are clear cost differences.

7. Federal Energy Information Administration (www.eia.doe.gov/e,eu/aer/elect.html).

General consumer lack of knowledge – which can be partially overcome with improved metering. Public education is also a requirement.

Distribution of fixed costs

Free-market economists have a distaste of cross-subsidies. But there are situations in which cross-subsidies can be used for desirable distributional ends, without any distortion of economic resources.

We certainly do not support the use of cross-subsidies for energy consumption. Indeed, we would like to see the elimination of stepped tariffs (which step down at a certain level of consumption), which favour higher use consumers; these cross-subsidies have no economic justification. At the briefings and in the SCO paper there were many references to the inequities and inefficiencies of low-income low-use consumers subsidising high-use consumers for use of appliances such as air conditioners and swimming pool pumps.

When it comes to fixed supply charges, however, there is a strong case for cross-subsidies from richer to poorer households. Because demand for utility connection (in contrast to use) is inelastic[8], there is no resource misallocation in such cross-subsidies, and they can serve desirable redistributional functions with low transaction costs.

Such cross-subsidies would have to be mandated, to prevent utility firms from cherry-picking the market.

Methods of price regulation

On methods of price regulation, we stress that the present forms of regulation are very generous to energy companies. Most of the costs incurred by transmitters and distributors and many of the costs incurred by other parties are capital costs. Regulators use CAPM methodology to come to a cost of capital for such firms.

It should be remembered that CAPM uses *volatility* as a proxy measure for *risk* – a rather imperfect proxy measure in fact. But for a long-term investor in energy, particularly at the retail end of the market with captive customers, it is doubtful whether there is any discernable market risk.

We suggest that for those companies involved in the transmission, distribution and retailing of energy, the appropriate cost of capital should be the risk-free real government long term bond rate. That may well be lower than the opportunity cost of capital faced by some firms now in the utility business; if so there is a strong case for governments to re-nationalize the industries, possibly contracting to private companies to manage (but not own) the assets if governments wish to draw on private sector expertise. Such re-nationalization would not

8. Inelasticity is a reasonable assumption for water and electricity. For gas there may be some elasticity of demand. But where gas mains are already supplied the marginal cost of connection is probably low, and the benefits of mixed energy use may be quite high.

only provide for a lower cost of capital; it would also reduce transaction costs because of the benefits of vertical integration.

And, in order to prevent governments using utilities as a *de facto* taxation base, there should be retention of independent price regulation.

We also stress the need to sustain a "CPI-X" form of price regulation. The "X" factor ensures that at least some of the benefits of productivity gains are returned to consumers.

But, while the CPI is a reasonable indicator of movements in the cost of living for an average household, it is not necessarily representative of cost of living movements in poorer households. Over the last 14 years (the period of the present series of the CPI), there have been very high price rises in health care and education, and above average price rises for food. The items which have kept the CPI low include telecommunications, travel, household appliances and entertainment equipment.[9] We would reasonably expect therefore that movements in the cost of living for low income households are higher than the CPI indicates. (We appreciate that in mature industries, such as utilities, it is going to be difficult to find ongoing productivity gains.)

Conclusion

We remain to be convinced that costs of fragmentation and privatization of utility monopolies have been justified by demonstration of tangible benefits. These costs are:

- advertising – for the same electrons, water molecules and gases;
- duplicated administrations of competing companies;
- legal and contracting costs, as parties in the supply chain deal with one another;
- the cost of finance on private markets – the old state monopolies had access to capital at government bond rates;
- the costs of regulation – what was once achieved by government direction is now achieved through separate regulatory agencies.

Users of utilities are concerned about price, reliability and quality – they don't necessarily see any benefit in contrived competition. Competition, it should be remembered, is a means to an end, not an end in itself.

9. See ABS *Consumer Price Index* (Cat 6401.0), detailed tables. Because the present base in 1989-90 the series shows gross price movements over 14 years.