

Australian Consumers' Association
Submission to¹
Productivity Commission
Inquiry into energy efficiency
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The Australian Consumers' Association (ACA) is a not-for-profit, non-party-political organization established in 1959 to provide consumers with information and advice on goods, services, health and personal finances, and to help maintain and enhance the quality of life for consumers. The ACA is funded primarily through subscriptions to its magazines, its website, book publication, fee-for-service testing and related other expert services. Independent from government and industry, it lobbies and campaigns on behalf of consumers to advance their interests.

Australian consumers enjoy relatively low energy prices, generally reliable energy supplies and the considerable benefits that accrue from access to labour saving, comfort giving and lifestyle enhancing domestic equipment. Energy policy confronts numerous issues, particularly greenhouse gas emission control and capital requirements to meet rising demand. While these must be addressed in the long-term interests of consumers, the solutions should not detract from this current envelope of affordability, safety, reliability and comfort.

Energy is a consumer essential that does not (yet) constitute a large proportion of the household budget. It is important to bear in mind that consumers do not deem price to be the key issue with electricity supply. Energy usage is an aspect of product or service selection, but not the only or dominant one. Consumers certainly expect energy supply and security will be assured at an affordable price. An affordable price is not necessarily the cheapest possible, or even one that accords with the optimal economist model – it is one that fits into a framework of value expectations. Far from embracing energy profligacy, Australians are living their admittedly energy intensive life style more efficiently than ever. ABARE² that in 2000-01 Australia used 93 per cent more energy than it did 27 years earlier. Without reductions in energy intensity, it would have used 136 per cent more. In the same indicative way it is worth noting comment in the context of recent oil price increases, such as that from Ross Gittins in the Sydney Morning Herald. He notes:

Economic activity is much less dependent on oil than it was 30 years ago. The “energy intensity” of world output – measured as barrels of oil consumed per \$1 billion of real GDP – has declined by almost half.³

Consumers do choose, and are likely to continue to choose, an energy intensive life-style. There are those that take the position that a modest decline in electricity prices over the last couple of decades has driven increased consumption. It is not persuasive to argue that electricity price drops directly cause consumption increases, and to argue

¹ ACA File Reference 040092/01; 30 November 2004; ACA contact Charles C. Britton (02) 9577 3290

² ABARE publication *Trends in Australian Energy Intensity, 1973-74 to 2000-01* on energy intensity trends in Australia. Cited in

http://www.industry.gov.au/library/content_library/MCECommunique4_13jun03.pdf

³ Ross Gittins “Don’t fret – oil price jump has its positives” P44 Sydney Morning Herald Oct 23-24 2004

as a corollary to this assertion that price increases will therefore curb consumption. There are a number of reasons for increased energy consumption by consumers, such as the cheapness and availability of electronic goods and the behaviour of those devices (e.g. standby).

The question of consumer price perception then relates to the other great assumption underlying proposal for changes to interval and time of use metering – that price signals will drive consumer behaviour in directions favoured by regulators, economists and suppliers. There is considerable debate about whether to mandate a roll out of interval meters that could track when people use electricity and charge accordingly (so in theory sending a ‘price signal’ for peak usage). Various states are at different stages, with Victoria furthest advanced towards mandating a rollout. There are regulatory pressures in National Electricity (NEM) jurisdictions to move the marketplace towards interval metering. Any mandatory rollout of interval metering must be subject to a cost and benefit analysis by jurisdictions and such an assessment should address not only economic costs, but also consumer behavioural outcomes and social impacts.

The first difficulty with the semaphore is that metering does not provide a price signal to the consumer. It is simply a step in the value chain that starts with a consumer’s use of a device and culminates in payment. However there are a number of steps in this chain: Usage - Metering - Price determination - Cumulative Billing - Payment

Metering does not equal billing, and it is misleading to state that metering of any variety will send a price signal to consumers. It is unlikely even to make consumer aware of their consumption in energy units, since most consumers have better things to do than spend time watching their electricity meter go round. Notions of providing real-time signals to consumers have to be tempered with the cost impact such an approach would entail. Without such an intervention the meters will send no signal of themselves. Displaying the actual price being billed to the consumer in real time with predictive costs for the next consumption periods, along with a cumulative amount for the billing period might be a desirable state of affairs, but this would also involve very substantial investment costs.

The price to paid for the energy units used must be determined – this will be mediated by the pricing schedule or plan the consumer has chosen. This may or may not be rational for the actual pattern of use that occurs. The signal may be – ‘You are on the wrong plan!’ – rather than ‘You are using too much juice!’ The actual price for energy units consumed will likely vary from consumer to consumer, so the signals will vary. These will then be rolled up into a cumulative bill that will be delivered at some point in time remote from the metering events. This exposes a crucial conundrum. Electricity billing takes place after the fact. Large bills may influence consumer behaviour, but since they come after the event (and in the case of the peak pricing of electricity, result from a fortuitous use of equipment at a particular time) they will also be greeted with outrage. It is basic to consumer protection that a person should know costs before purchase. If the intention is to influence consumers in a dynamic market, then their right to be informed about price before committing to usage must not be ignored.

For isolated incidents of metering to attract attention, the price effect will need some exaggeration, to the point that they will probably cause consumer consternation and perhaps an agitated response. Consumers exposed to the market price of electricity would have reacted in horror when after electricity prices hit \$3895 per megawatt hour⁴ during the firestorms of Sydney in 2002, the impact was apparent in their bill three months hence. Such pricing resulted from catastrophic systems failure under stress of natural disaster. There is no 'lesson' to be taught to consumers in this, and no actual increase in the price of providing the service, the price simply being an artefact of the trading system. There is no way that it would be useful or desirable to expose consumers to such price effects. In the event consumers would probably reiterate that view in less subtle language.

Interval metering and subsequent billing for variable usage patterns is a species of price discrimination. Price discrimination is something of a holy grail for economists and is regarded as the mark of an efficient market. However analysis from a behavioural economics perspective shows that consumers generally detest the consequences. The conclusion is that in general, the economic advantages of price discrimination are and are likely to remain in direct conflict with public dislike of such practices.⁵ People do not like being subjected to dynamic pricing. There is abundant evidence of this shown, for example in reactions to airline yield management and the moves to extend such practices to other areas. Amazon.com experiments with variable pricing during the Internet bubble were noticed and publicized almost immediately.⁶

There is a need to examine critically from the consumer perspective the limitations of price signalling on the variable use component of capital intensive, fixed cost heavy industries as a strategy to change consumer behaviour. Actual costs related to electricity consumed, as opposed to covering fixed costs of generator plant, distribution and retailing are comparatively low. Inflating the usage component will lead to increased pressure to unbundle fixed costs. Indeed in a capital-intensive industry, the rational commercial emphasis and imperative would be on recovering fixed costs with standing charges unrelated to usage. This may well be a more economically efficient method of funding the industry in any event, in which case the assumption underpinning interval metering that detailed usage pricing is the most efficient approach is open to fundamental challenge.

Indeed the whole fixation with avoiding peaks, via price signalling or other interventions can readily be characterised another species of behavioural economics, this time on the part of suppliers and regulators rather than consumers. The intolerance of peaks or 'peak aversion' can be seen as a form of mental accounting, where the efforts of the human mind are at odds with the way the world works. Economists have a preconception of efficiency that deems a level consumption curve as optimal. However the physics of electricity, and probably other peaking systems, do not lend itself to such a construct. The way to efficiently and effectively meet a peak demand is to create sufficient capacity to service it. Peaks exist because that is the way humans behave in certain circumstances, and markets exist to serve consumers, not consumers to service markets. This is just another reason expecting

⁴ Sydney Morning Herald 5-Dec-2002 P.27

⁵ <http://www.dtc.umn.edu/~odlyzko/doc/privacy.economics.ps> Page 15

⁶ <http://www.dtc.umn.edu/~odlyzko/doc/privacy.economics.ps> Page 4

environmental and other outcomes from usage related price signals is like pushing on a piece of string.

Consumer domestic use of air-conditioning is frequently cited as a spur to install interval meters. It is far from clear exactly how high prices would have to rise to actually deter consumers from using their air conditioning units in the circumstances for which they bought them, that is when it is very hot. If the consumers continue to use their air conditioners in the face of even savage pricing (albeit pricing they will complain bitterly about when the bill arrives) then the peak reduction sought will not be achieved. On the other hand, price signalling to reduce demand starts to run into what has been termed the “spiral of impossibility”; as higher prices discourage demand, fixed capital costs will have to be spread over a smaller number of kilowatt-hours. These in turn leads to still higher prices, which will further depress demand.

Close to a majority of households now possess and use an air conditioning unit. Those that do not currently possess an air conditioner still have an interest in a robust system during times of peak operation. Many consumers will be potential air conditioner users, and hence beneficiaries of any investments made. These factors all suggest investment in the network to meet peaks is a general expense that can legitimately be shared across all users of the network. This then argues that the case for investing in time-of-use metering is over-stated. Infrastructure to facilitate interruptible or remote switchable loads would seem to be a better opportunity than crude user pays half hour price signalling or variants that throw financial risk onto the consumer. This could drive a lower cost outcome for all consumers, and this should be presented as savings or benefits for consumers for moderating consumption.

It is not clear why the consumer utility of cooling should be discounted in some fashion compared for instance with the utility of heating. Discussions of fuel poverty frequently revolve around the difficulty of people keeping warm in winter and the mortal danger of cold. It is worth bearing in mind the tragic impacts of the 2003 heatwave in France, was estimate to resulted in 14,802 deaths in a country where air conditioning is rare.⁷ Closer to home 30 people died in Brisbane in 3 days of heatwave this summer⁸. On the other hand, during the same heatwave conditions in Sydney, reports were that hospitals attributed a surprising absence of heat stroke cases to air-conditioner use.⁹ Clearly heat presents a mortal danger, and is something Australia has in abundance. Air conditioning can be as life preserving as heating. It does not deserve the moral excoriation sometime visited upon it.

Moving to a summer peaking system in states such as NSW should perhaps be seen as a transitional issue. It is a situation that will perceived in less alarmist terms as air conditioner usage becomes even more common and the supply system adapts to delivering the appropriate resources to match the load profile (in all likelihood still peaky) that emerges. The goal should be to create a supply system that meets the needs and requirements of consumers (cooling on hot days being a key one for many consumers), even if that is a challenge for industry. The atmosphere of crisis will dissipate as the industry rises to that challenge and it will cease to be seen as needing special attention.

⁷ http://www.usatoday.com/weather/news/2003-09-25-france-heat_x.htm

⁸ <http://www.timesonline.co.uk/article/0,,1-1012471,00.html>

⁹ The SUN-HERALD Feb 22 2004 P17

In general our view is that any mandated (or even government or regulator endorsed) rollout of interval meters must be accompanied by a comprehensive package of best practice consumer protection. However, we see the probable context as a market populated with one-sided, take it or leave it, bundled contracts, based on standard forms of agreement, the terms of which consumers may not even see when they sign up. The push to create a national regulator seems happy to leave consumer protection in the hands of the States – perhaps another way of spelling ‘too hard basket’. The competitive retail environment is embryonic in those states where contestability has been introduced. Untested codes of conduct and state based energy ombudsman schemes are a relatively fragile line of defence for consumers, especially in the light of what happened in telecommunications as contestability emerged – churning, slamming dumping and cramming. This context carries a significant risk of consumer detriment and hence consumer protection must be highly coupled to any changes in metering.

In general terms it is the position of the ACA that the atmospheric environmental focus for energy should be on the policy objective of greenhouse abatement, not necessarily on energy consumption as such. In our view policy for abatement should encourage flexibility to develop the most cost effective methods to achieve that policy objective. We have concerns that driving targets specifically for demand management or renewable technologies will not necessarily deliver proportional reductions in terms of the cost of abatement achieved. In our view it is important to separate the goals of:

- a. greenhouse abatement and
- b. assistance to a particular set of energy technologies
- c. pursuit of demand management

Each of these should be dealt with in a transparent and standalone fashion.

It is also important in our view to distinguish between price signals designed to:

- a. encourage investment
- b. produce a peak mitigation response
- c. produce a base load greenhouse abatement outcome

There are non-price demand management initiatives that can and should be undertaken. More energy efficiency building stock, energy efficient appliances/equipment, proliferation of more benign technologies (like gas-fuelled Fuel Cells etc), broad ranging consumer education and "conservation" incentives for consumers to cut consumption, will be more effective than average or even time of use targeted increases in prices. Consumers want risk management, continuity of supply and price stability. Industry and regulators need to make sure they get them. There should be no ‘real-time’ tariffing of consumers; there must be price smoothing. The hazards of the peaky electricity market being transmitted into consumer tariffs are well known. These hazards must not be transmitted to small consumers, who definitely lack access, knowledge, or desire to use sophisticated risk management tools (such as those employed by larger enterprises to interact with the market) just to turn lights on or cook a meal. Price signalling to consumers in electricity markets is unlikely to reduce usage except at levels that will create bill shock and considerable consumer alarm. However it is likely to affect those least able to cope and adapt. Attempts to create ways of feeding so-called market signals (code for good old-

fashioned price hikes) to consumers will simply mean the most powerless group of stakeholders in the industry will pay the highest price.

In our view, orientation and assessment of the goals and regulation of the energy industries should be in reference to long-term interests of end-users. This test is explicitly at the heart of telecommunications regulation and should be employed more widely in network style industries such as energy. This is not because it represents some kind of consumer nirvana. It is quite possible to critique the phrase “long-term interests of end-users”. Long term is generally a frightfully convenient place. After all, it very seldom arrives, and if it does, it is hardly ever what anybody expected. ‘End Users’ is another fascinating term. The technology-based industries constantly refer to ‘Users’, and hardly ever in complimentary terms. Users are passive, and as such their interests have to be looked after for them.

So the LTIE can be caricatured as referring to managing the interests of passive people for them in time frame so far from them that it is of little relevance. However, as is becoming apparent with the slow take-up of retail contestability in energy markets, some kind of regulatory oversight is required to give consumers of energy services a market place where they are not passive users of energy networks, but active customers of energy service providers. It is important to emphasize the *long-term* nature of the LTIE test. It is not just about providing consumers with the latest fashionable technology or service innovation. However it is not just about treating them as a proxy for the economy as a whole either. The test of the interests of end-users means that the excesses of economic purism can be contained by an imperative to meet the needs of consumers.