

Energy Action Group

Submission to the MCE on Consumer Participation.

The MCE SCO should be complimented on trying to address the issues outlined in the MCE Paper on Consumer Participation. There however a number of deficiencies/omissions in the paper that EAG wishes to address in this submission to ensure that a reasonable level of consumer participation can occur in both the gas and electricity markets.

This submission attempts to show that a number of the issues raised in the Discussion Paper are inter-related. There is, for instance, a strong relationship between demand management and appropriate interval metering. There is also a close relationship between interval metering and the allocation of retail, energy and market based prices plus Distribution Use of System and Transmission Use of System Charges.

It is EAG's opinion that to further simplify the issues in the Improving User Participation in the Australian Energy Market Discussion Paper will create significant on going problems for the MCE to solve well into the future. This has the potential to further exacerbate some of the existing inequities in the NEM.

EAG has attempted to set a context for the Discussion Paper and attempt to highlight some of the deficiencies in the paper.

Direct ongoing Consumer Participation

- 1) There has been negligible involvement or participation of consumers in the NEM and Gas Market reform process and in current decision making bodies. It is extremely unusual to get more than 3 or 4 submissions from consumers or their representative bodies in any of the numerous ACCC, NEM, jurisdictional consultations or regulatory processes. The current consumer skills base consists of 4 groups and 3 consulting companies who regularly make submissions on the wide range of issues being addressed by the gas and electricity reform process.

The sum total of formal consumer representatives consists of 2 on the NECA Reliability Panel, another 2 on the ACCC transmission standards reference team and one representative on NGPAC (which hasn't met for some period).

Currently there is one representative on the NEMMCo Participant Advisory Council and a number of consumers participate in the NECA Market Liaison Panel.

This is a far from impressive consumer involvement in the decision making process.

- 2) Consumers do not have an adequate level of resources or the legal standing to challenge any regulatory or Ministerial decisions. For example:
 - The failed appeal against the Federal Ministerial decision to uncover 2/3 of the Moomba to Sydney pipeline highlights a number of issues related to resourcing and standing!
 - There is the need to address the ongoing issue of the appeals on ACCC decisions by private gas transmission companies.
 - The Victorian electricity consumers were completely excluded from the 4 distribution companies' ORG 2000 Distribution Pricing Review appeal process. The judgement from this appeal resulted in Victorian consumers paying over \$100 m extra over the 5 year life of the determination.
- 3) The decision by the Advocacy Panel to limit the resources to consumer groups wishing to make submissions to regulatory reviews. It is worth noting that regulated entities are paid - by consumers - to participate in regulatory processes. For instance the Office of the Regulator General allocated \$ 67 m (real) to the 5 Victorian distribution businesses to spend on regulatory issues between 2001 and 2005 in the 2000 Distribution Pricing determination.
- 4) The inability of community based organisations to facilitate the aggregation of like minded customers into successful buying arrangements, even though several jurisdictional pricing determinations have built in "head room" to encourage churn and aggregation.
- 5) The failure of the jurisdictions to understand the costs associated with the implementation of FRC and then to proceed with railroading consumers into the markets they don't understand. The implementation of gas FRC in South Australia provided a useful example. Several jurisdictions have still to implement their FRC arrangements so as to meet their obligations under the Competition arrangements with the Commonwealth.
- 6) The need for long term funding for less than 160 MWh/electricity and 10 GJ/a gas consumers groups wishing to become involved in the design, market and regulatory processes. The NEM Advocacy Panel decision making to date (for instance) has failed to understand that groups/organisations representing the less than 160 MWh need to have long term funding arrangements, if they are going to make a contribution to the development of the NEM arrangements. It is important to note that consumers have had minimal participation in gas market reform, with the exception of the development of the unique Victorian gas market.
- 7) Each jurisdiction has a different gas market based around Market System Operating Rules that include different system balance and linepac arrangements. This makes gas retailing more difficult at a national level and the current lack of consistency favours incumbent

retailers and reduces competitive pressures. It is important to sort out the gas market arrangements to ensure that gas fired peak load electricity generation pays its way.

- 8) The less than impressive approach by the MCE at its April meeting on the way to address consumer involvement. A jurisdictional Minister having an open door policy doesn't address national gas or electricity market issues nor does it address the deficiencies in the consumer skills base. One jurisdiction - NSW - funds a low income consumer program to the tune of \$ 140,000 a rather paltry sum when compared to the size of the NEM and gas market and their influence on the Australian economy and the well resourced utility industry.
- 9) No jurisdiction or regulator has any understanding of the impacts of their decision making. The first and last study into residential consumption patterns was in 1982 a NERDC funded study by carried out by CURA. It is imperative that an integrated consumption study be carries out across the NEM on a regional (Distribution Business) basis. The study needs to include customer numbers, income levels, consumption patterns and appliances including holiday homes. The study need to be repeated every 4 years so that market penetration rate of appliance can be picked up and the effect of policy setting and regulatory determinations measured. The information will also assist in identifying some of the sources of changes in Annual Load Duration Curves across the NEM. The lack of load information has again been highlighted in the current IPART Distribution Pricing Review

A) Demand Management

Most of the jurisdictional arrangements pay lip service to DM, energy efficiency and embedded generation. In NSW, SEDA has a charter to "investigate"; in Victoria, VENCORP has a role to "facilitate"; and in South Australia the government has failed to effectively implement most of the recommendations of the Demand Management Task Force Report.

The Discussion Paper neglects to mention any significant contribution of energy efficiency and embedded generation. Both approaches have an ability to make a significant contribution to manage load growth.

Demand-side bidding: some comments

There are a number of issues that need to be sorted out in relation to demand side bidding

The effect of changes down in price in NEMMCo's Short Term-Projected Assessment of System Adequacy processes, which will in turn influence the customer Demand side bidding process. The NEM Code provision allows rebidding up to 5 mins before generator dispatch while most consumers with demand side bids, particularly those with

relatively large quantities of energy, cannot match that level of generator flexibility due to their ability to rebid.

Who pays-if the price erodes on an active Demand-side participant's bid? E.g. When a company shuts down a process or even their plant on the basis of a \$300 bid/MWh and then the price erodes to below their \$ 300/MWh bid. The company either needs to restart the process they stopped or receive a lower pool price which costs company money due to the loss of production not being compensated for by the income received for not consuming electricity at the \$300.MWh bid price.

The amount of energy saved is extremely useful, but limited in each jurisdiction. The temperature dependant less than 160 MWh consumers in both SA and Victoria for instance, have load increases from minimum generation in the early morning on a very hot day to the maximum demand at the peak load period around 4.30 pm. This load flex increases the regional system load by equivalent to the total industrial load. (The incremental peak load /industrial load is approximately 700 MW/ 700 MW in SA and around 3500 MW/ 3500 MW in Victoria).

Given the success of a demand-side bidding strategy, there is still a significant issue with the transmission /distribution system which needs to be built/sized to supply the MW (Demand) to less than 160 MWh consumers on the highest peak load day. Unfortunately, the load is not spread evenly across the network particularly below 6kV in the distribution system, so network investment can be rather patchy. Around half of the \$12 billion currently being allocated across the NEM for network investment for new and replacement assets is going to be spent to meet the temperature-dependant summer peak load growth for the less than 160 MWh consumers (in the main voters). If the full expenditure allocated by the various jurisdictional regulators is made by all distribution and transmission companies then the resultant new investment will cost consumers an extra \$ 450 million/year net by the end of the current regulatory cycles.

The demand-side response policy needs to include less than 160 MWh consumers to minimise energy market volatility and the massive investment in network infrastructure to meet the summer peaks.

One of the significant performance failures in the NEM has been the substantial deterioration of the Annual Load Duration curves (ADL) in each jurisdiction. Part of this problem has been caused by the dramatic increase in peak demand (MW) requirements. This issue is best demonstrated by the 13.5% MD load growth experienced by Energex, the Qld distributor/retailer last summer.

The deterioration of the ADL means substantial additional investment and under utilisation of generation and network assets (particularly distribution networks) put in place to meet projected peak loads. The challenge for

consumers is compounded because the investment is made on the basis of peak MW but is mainly being paid for by the sale of MWh's. This mismatch of investing in MW and paying for the investment by MWh's is driving up network charges across the NEM.

Much of the peak load increase is associated with air-conditioning; due to jurisdictional reluctance to allocate prices to the source of problem, that is the less than 160 MWh consumers. Currently this group of consumers is seeing minimal pricing signals telling them to alter their behaviour other than general price increases. The market design theorises that consumers should respond to appropriate price signals. This suggests that they should ameliorate their behaviour by switching off or reducing loads that are adding to the summer peak loads and high prices. The belief is that if the appropriate price signals were available to tell this group of consumers how to behave they would do so. The evidence to support this proposition is mixed. There are claims around that in South Australia public announcements have effected peak load consumption. There is little evidence available to say that this strategy works over time. EAG believes that the implementation of an appropriate metering strategy outlined below will help reduce summer peak load growth.

The current Draft IPART Distribution Pricing Determination provides a fine example of how all Australian regulators have failed to address the problem of price signals and a deteriorating ADL.

Several jurisdictions have been applying direct pricing caps on residential DUoS charges. This has resulted in significant increases in these charges to consumers with loads over 160 MWh/a. The price increases from partial residential price capping have had some effect in driving business and commercial energy efficiency programs. However the evidence is not particularly well documented and the Federal Auditor General's Audit Report No 34 2003-4 Performance Audit on the Australian Greenhouse Office suggests that a lot of work will be necessary to set up targeted energy efficiency programs that work.

B) Interval Metering

Interval Metering is part of a load management solution that provides the basic technology for accurate allocation of prices to consumers with differing load patterns.

There are no accurate price signals in the market place that the less than 160 MWh electricity consumers can respond to.

There are a number of time-dependent prices and charges associated with the NEM. These prices and charges relate to the energy only market, 6 Ancillary Service Payment Markets, Network Control Ancillary Service charges and NEMMCo directions. The prices and charges are smeared over less than 160 MWh customers leading to substantial cross-subsidies between consumer classes, particularly between flat and volatile load customers.

One of the major, but not the only, price drivers in the NEM is load volatility, particularly the demands placed on the generation and network infrastructure to meet the summer peak loads. In most circumstances, the costs tend to be smeared over a 12 month retail contract or the standing offer. In Victoria for instance, the average residential consumer uses around 5000 MWh/year. The current Victorian Deemed Standing Offer arrangements ensure that a residential consumer without air-conditioning subsidises other consumers who use a significant proportion of their load over the summer period by a sum around \$220/year.

The MCE decision needs to incorporate a staged process on a tighter/faster roll out than proposed under the Draft Victorian Essential Service Commission Decision on Interval Metering. A faster roll out of Interval Meters minimises the individual costs of meters and associated installation costs.

Stage 1- Meter roll out over 5 years for all less than 160 MWh consumers, ensuring that all the meters have several available slots for cards that provide for 2 way communications and load management functions.

Ensure that all the investment costs (including stranding) are part of the Distribution business assets base and the new assets have a depreciation cycle over 10 years. Competition can be introduced by tendering for the roll out by area.

Stage 2 to be run concurrently with Stage 1- develop meter card and appliance communication protocols on a national basis so that any individual who wishes to manage their load can do so. For instance a large air-conditioning load can be zonally switched or a range of non essential appliances switched off at appropriate times to manage load.

It is clear that interval metering cannot address the issue of load volatility on its own. This decision needs to be part of a national package of appliance efficiency measures and the development of energy efficient smart houses with zonal heating and cooling. It was disappointing to see that the MCE SCO didn't consider an integrated energy efficiency program as important. EAG suggests the any emphasis on energy efficiency, with the exception of several energy pricing options, has been lost from early in the reform process around 1993.

The NEM is currently settled using a dynamic Net System Load Profile. The greater the number of interval meters the more accurate and responsive the Net System Load Profile.

Interval Metering should ensure that retailer/distribution businesses can effectively manage load or allocate costs on a user pays basis. At worst retailers/distributors can be pressured into offering load management services as part of their Code obligations or licence conditions.

Currently much of the customer churn in the jurisdictions with FRC is based on the 2nd Retailer gaming the Net System Load Profile. This arrangement

leaves the 1st tier Retailer to underwrite the losses. It's not unheard of for the 1st tier retailer to go to the Jurisdiction or the appropriate regulator and to ask for a price increase to cover the losses of customers with poor load curves (very profitable for the 2nd tier retailer) as their load curve deteriorates.

EAG understands that the 2 Queensland retail and distribution businesses Ergon and Energex have two residential tariffs -Tariff 11 a straight on peak tariff based on a full retail price and Tariffs 31 and 32 which use Power Line Carrier technology Anecdotal evidence from both companies indicate that they believe that they can interrupt up to 900 MW of load using these two tariffs.

The Qld Power Line Carrier contribution to Demand Management offers larger guaranteed reduction in load than the Demand Side bidding proposals for large consumers proposed in Chapter 2. However both options need to be looked at not just the Demand Side Bidding option.

In conclusion, it is worth mentioning that there are at least 3 load management options available to less than 160 MWh consumers with appropriate interval meters-

- A) Allowing the distributor or retailer to manage costs and risks on behalf of the consumer.
- B) The consumer to nominate how they want the retailer to manage their risk or having a device that they can program to manage their consumption pattern.
- C) The consumer wears the costs of their individual consumption patterns.

EAG believes that Interval Metering is a strong step in the right direction, but the decision to "roll out" needs to be packaged with other load management options partially outlined in the section on Demand Management.

The appropriate use of Interval Metering allows for much more effective pricing arrangements to be employed across the NEM. They also offer a simple way forward to enable more people to understand the huge costs associated with summer load growth.

It is important for jurisdictional policy makers and consumers to begin to understand the cross-subsidies and costs involved in unravelling the poor consumption pattern that is being subsidised by consumers with good consumption patterns and allowing consumers the potential to begin the process of market risk and effective load management.

C) Retail Pricing

The use of pricing theory underpins the NEM design and the "causer pay" principles that have been written into the Code. The jurisdictions have ensured that in most cases for less than 160 MWh consumers the "causer" do not pay.

Most jurisdictions in the NEM are sticking to either a state based postage stamp approach (ACT, SA and Tasmania excepting King and Flinders Is.) or a distribution business based postage stamp approach in Victoria, New South Wales and Qld.

It is clear that the use of different prices across the NEM for the temperature dependent volatile less than 160 MWh has not delivered any effective behavioural changes in consumption. No matter how high the price is, all NEM jurisdictions are experiencing deteriorations in their Annual Load Duration curves reflecting the move to summer peaking systems. This change has dramatically increased the investment in generation plant to meet the high levels of demand over the Australian summer and \$ 5 billion of the \$ 12 billion network investment under consideration or just determined by the ACCC and the jurisdictional regulators.

Currently across the NEM, the most common bundled residential on-peak tariff offerings vary from 10c/KWh in urban parts of NSW to 17 c/KWh in SA and up to 19c/KWh for all power sold on Flinders and King Islands in the Tasmanian jurisdiction.

The various jurisdictional arrangements have been based on the traditional utility distribution company postage stamped DUoS, TUoS and Distribution Loss Factors approach to the network pricing component of a consumer's bill.

In contrast, a consumer's energy costs are determined by the price of energy brought and settled through the NEM by retailers. The retailers can financially hedge their positions and their anticipated load is usually covered by contracts or a range of financial instruments usually contracted with generators.

The retailers also need to factor in the various Ancillary Service Payments and the occasional NEMMCo direction cost when pricing a retail offer. These arrangements are usually outlined on less than 160 MWh customer's bill and covered by the contractual deal between the retailer and the customer. Unless of course a particular customer wants to take a full price pass through arrangement.

The solution for less than 160 MWh customers in an FRC environment is to set up a Standing Offer tariff. The Standing Offer tariff is provided to all less than 160 MWh consumers without a market contract with a retailer. The Standing offer is usually jurisdictionally approved and has a bundled smeared energy cost. This energy cost bundling approach ensures that there are minimal pricing signals passed through to consumers and any concept of using a "causer" or "beneficiary" becomes null and void. Under the Standing offer arrangements there are no pricing penalties or rewards.

The energy price allocation using smeared costs fails to differentiate between high priced (volatile peak load) and low priced (flat load) consumption reflected by the Australian Financial Markets Association flat load forward price curve. This curve provides an indication of forward contract prices for energy.

The price allocation arrangements are complicated by two different approaches adopted by the jurisdictions to protect less than 160 MWh consumers from high prices. The first is to use some form of tariff equalisation scheme or subsidy which smoothes the energy price path. This approach completely mutes any energy price signal.

The second is to bundle an estimate of the flat load price and an estimate of the peak load price based on a strategy of over-contracting (say) \$300/MWh price caps and providing the 1st tier (the incumbent) retailer with a margin to cover the price cap and energy prices to \$300/MWh.

This approach results in an annualised smeared energy cost of between \$65 /MWh (Victoria) and \$72 /MWh (SA). The two jurisdictions argue that the standing offer has head room to encourage competition and this will be competed away with retail competition between retailers. In the short term, Victorian and South Australian consumers are enhancing retailer's profits. One only has to look at the financial results particularly the profits of Origin, AGL and TXU to see the consequences of this approach. In the mean time, summer peak loads and market risks are continuing to grow.

There also appears to be an incremental pricing creep mechanism at work. Most of the evidence available to the EAG indicates that the 2nd tier retailers are gaming the dynamic Net System Load Profile and the 1st tier retailer is underwriting the gaming by allocating the costs against less profitable customers. This then provides a further driver as the 1st tier retailer has to recover the costs associated with having a less profitable customer base!

Most of the jurisdictional legislation across the NEM has some provision in the enabling legislation to protect the 1st tier retailer's viability. The result for consumers is pay higher prices. Consumers pay for the costs of the increasing summer peak without any price signals and their jurisdictions promote the illusion that retail competition is working. Most consumer surveys still show that consumers don't understand the reforms!

The states with full exposure to the energy market and the impacts of network expansion (Vic and particularly SA) have had price increases over the past regulatory cycle. There is little evidence that smeared pricing signals inherent in the current standing offer regime has not done much to sort out issues around who pays for load growth. The uses of cost smearing and Net System Load Profiling only exacerbate the standing offer cross-subsidies where consumers with relatively flat loads subsidising consumers causing the summer peak load problems.

Both NSW (EETF) and Qld have subsidies or direct grants to either their retailers or distributors that limit Standing Offer price increases to the costs associated with network replacement and expansion to meet population growth and increasing summer loads. The Victorian Government has a similar program specifically for rural residential off peak heating and hot water loads.

EAG repeats the recommendation in point 9 page 3 in this submission that each jurisdiction carry out customer surveys that provide information on the relationship between market for gas and electricity, income, consumption appliance types, size and age, housing quality and ownership. A number of utility pricing practices are based on ensuring that holiday home owners pay their way. Unfortunately in the process these pricing arrangements penalises low income consumers.

Currently it is almost impossible for less than 160 MWh consumers across the NEM to access any sources of information that allows them to compare the various retail pricing offers available to them. This problem needs to be addressed across all jurisdictions. EAG recognises that ESCoSA web site has a simple price comparator but this web site would have difficulties addressing a number of utility tariff offerings, particularly if one looks at some of the offerings from Alinta Networks and Country Energy!

The challenge for the MCE is to strike the right balance between the proposed changes outlined in this paper and the other work streams to ensure that the market can reach its full potential.

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