



Submission to User Participation Working Group on discussion paper

“Improving User Participation in the Australian Energy Market”

15 April 2004

The Essential Services Commission (ESC) welcomes the opportunity to make a submission to the SCO user participation discussion paper and supports, with the objective of increasing market efficiency and the effectiveness of competition, increased user participation in the NEM.

The ESC will confine its comments to those matters in the discussion paper where the ESC has considered the matter or relevant matters.

Interval Meters

Rolling out interval meters

The ESC has published its draft decision for the mandatory rollout of interval meters in Victoria¹. The Commission’s decision to mandate a rollout of interval meters is predicated on its assessment that;

- market forces alone would fail to deliver a timely interval meter rollout on a scale sufficient to provide economies in meter manufacture, installation and reading
- regulatory intervention would be required to achieve the economic benefits that would result from a more timely and larger scale rollout
- based on its cost–benefit analysis, a net economic benefit would arise from a timely, mandatory rollout of interval meters.

In summary, the Commission’s draft decision for a rollout of interval meters to Victorian electricity customers is for;

- interval meters to be installed within two years for large customers (those consuming greater than 160 MWh per year) commencing in 2006 and on a new and replacement basis commencing in 2004
- interval meters to be installed within five years for small business and residential customers (those consuming less than 160 MWh per year) with offpeak metering or three-phase metering with implementation commencing in 2006

¹ Available from the ESC website as follows:
www.esc.vic.gov.au/apps/page/user/pdf/IMRO_DftDecisionFinal5March04dwc.pdf

- interval meters to be installed on a new and replacement basis for small business and residential customers with single-phase, non-offpeak metering with implementation commencing in 2006.

The joint jurisdictional review of the metrology procedures in its draft report² also considered the question of interval or other efficient meters and the ongoing use of profiles. In regard to rolling out interval meters the Regulator’s recommended;

“The Jurisdictional Regulators are of the view that rolling out interval meters to all customers in a jurisdiction should not proceed before an assessment of the costs and benefits has been undertaken for that jurisdiction. Such an assessment has not yet been undertaken for all jurisdictions and therefore, the sunseting of profiling is not recommended at this stage...

The Jurisdictional Regulators recommend:

- Any jurisdictional assessment of the costs and benefits of interval meters should utilise the assessment framework discussed in section 2 [of the draft report];
- Any assessment should have particular regard to the roll out of interval meters to specific groups of customers, such as:-
 - All “large” first tier customers; and
 - Maximising the demand management impacts (for example customers above a determined threshold); and
- Any assessment by the jurisdictions should consider whether a new and replacement policy is appropriate for those groups of customers not targeted above.”³

Cost reflective pricing, customer behaviour and interval meters

In the context of interval meters and cost reflective pricing the discussion paper expresses concern that any removal of cross-subsidies may adversely impact certain customer groups. The ESC in its draft decision has discussed some analytical results of the magnitude of the existing cross-subsidies for some customer groups in Victoria. These results are based on a report by Trowbridge Deloitte, commissioned and published by the ESC.⁴ While interval meters with cost reflective pricing can reduce the energy cross-subsidies in the existing averaged tariffs and this impact can be positive or negative for individual customers, interval meters are also the basis of measures that assist customers in maximising their control of their energy costs by;

- Providing benefits to all customers from the demand response of those customers with interval meters
- Maximising the customers ability to manage their energy cost through information about their load and time-differentiated pricing, and
- Stimulating the use of efficient end-use technologies by customers.

² See Essential Services Commission, Essential Services Commission of South Australia, Independent Competition and Regulatory Commission (ACT), Independent Pricing and Regulatory Tribunal of NSW (IPART), Office of the Tasmanian Energy Regulator and Queensland Competition Authority 2003, *Joint Jurisdictional Review of Metrology Procedures—Draft Report*, December.

³ *Ibid.*, pages 69-70

⁴ Available on the ESC website as follows:

www.esc.vic.gov.au/apps/page/user/pdf/TrowbridgeR110903_CustomerCrossSubsidies.pdf

The discussion paper introduces the type of tariffs customers may choose with interval or other metering technology and discusses how customers may respond. The ESC's draft decision also discusses some of the price structures that are likely to develop in the market with interval meters and the associated customer behaviour based on Australian and international experience. In this respect the California Energy Commission (CEC) has recently released its impact analysis report on its advanced metering pilot for the summer of 2003.⁵ William J. Keese, Chairman, California Energy Commission commented on the results of this significant pilot study of advanced metering and dynamic pricing;

“Initial results are encouraging, TOU and CPP [critical peak pricing⁶] customers reduced their demand by 20% during the warmest summer afternoons in 2003.

The impacts are in line with prior information and put to rest the theory that California customers have already responded to higher prices and cannot respond any more.

They also indicate that coincident peak demand responds as much as the energy consumption during the peak period.”⁷

Efficient metering technology

The discussion paper proposes a study of the rollout of interval meters and TOU meters for particular customers classes. The joint jurisdictional review of the metrology procedures in its draft report considered the range of metering technologies that may lead to economically efficient outcomes. Both TOU and interval meters were considered in this analysis and the regulators commented as follows;

“The submissions recognised that, whilst TOU meters enable more cost reflective tariffs than accumulation meters, they do not enable tariffs to be as cost reflective as they could be using interval meters. Additionally, as discussed in the Issues Paper, TOU meters do not store the interval data that is required for wholesale market settlement and therefore second tier customers with TOU meters are required to be settled in the market on the basis of a profile.

The cost of a TOU meter is comparable to an interval meter, the installation and maintenance costs are similar, but the metering data service costs for TOU meters are significantly less than for an interval meter due to the greatly reduced quantity of data collected at each meter reading. However an additional cost incurred with a TOU meter is the cost associated with developing and maintaining a specific profile for those customers with TOU meters.”⁸

Market impediments

The discussion paper seeks specific comment of whether there are any market impediments preventing the market developing cost reflective tariffs and introducing interval meters.

⁵ Available from the CEC Website as follows:

www.energy.ca.gov/demandresponse/documents/spp_reports/SPP_Summer_2003_Impact_Rpt.PDF

⁶ For a reference on dynamic tariffs and customer response see; *Dynamic Pricing, Advanced Metering and Demand Response in Electricity Markets*. Hewlett Foundation Energy Series, Severin Borenstein, Mike Jaske and Arthur Rosenfeld, September 2002. Available from the CEC website: www.energy.ca.gov/commission/commissioners/rosenfeld.html

⁷ Available from the CEC website: www.energy.ca.gov/papers/2004-03-25_KEESE.PDF

⁸ *Joint Jurisdictional Review of Metrology Procedures—Draft Report*, op. cit., page 67

In its draft decision to mandate interval meters the ESC devoted chapter 3 of the decision to the question of the justification for regulatory intervention. That is, are there reasons why the market will not rollout significant numbers of interval meters where these meters can facilitate efficient market outcomes? Hence are there significant “market impediments”. On this matter the ESC concluded;

“For the reasons provided in this section, the Commission has concluded that the net benefits available from the widespread installation of interval meters are unlikely to be achieved if the initiative is left to the market place.

The analysis presented above indicates that there is likely to be a continuing market failure in relation to the timely installation of interval meters in the electricity retail market in the absence of appropriate regulatory intervention. This situation arises primarily because:

- Individual market participants are unable to capture the full benefits that would accrue to the market from their decisions to install interval meters
- The decision of energy consumers in relation to time of use metering and pricing are distorted by the current profiling system.

As a result there is likely to be continuing under provision of interval meters and a resulting loss of the potential efficiency benefits. The Commission has therefore concluded that regulatory action is warranted to overcome these market impediments and to realise the potential benefits available from a mandated rollout of interval meters.”⁹

The key impediment to the market rolling out significant numbers of interval meters, despite efficient outcomes, is that the market is structured so that the benefits of the meters are dispersed among a number of entities. It is unlikely that any single participant can capture enough of the benefits to enable them to make a decision to rollout interval meters.

The Internal Energy Agency (IEA) has reached a similar conclusion in its recent publication concerned with demand response in deregulated electricity markets. The IEA identifies three key barriers to the large-scale investment of technologies that will facilitate demand response. In discussing the role of governments and regulators in facilitating demand response the IEA comments;

“This dispersal of value, and hence of market incentives, for demand response represents a clear market failure in liberalised electricity markets, and a source of economic inefficiency. The counterpart of allowing the “invisible hand” of competition to regulate exchange is that the regulatory regime internalises all significant external values associated with electricity supply and use into the marketplace. This may require a willingness on the part of governments and regulators to intervene in order to ensure that demand response is integrated into the efficient operation of liberalised electricity markets.

the relatively low levels of demand side participation in evidence...suggests that disconnected markets, where the demand side fails to respond to tight supply side conditions and high price episodes, have already developed and that business models

⁹ Essential Services Commission 2004, op. cit., page 22-23

have not emerged to provide a natural market remedy. Thus it may be an early signal that remedial policy intervention is in fact required”¹⁰

Tariffs and pricing information for customers

The ESC has also recognised that customers need better and more accessible information if they are to make informed decisions regarding their retail supply of energy.

The ESC in a consultation paper considered that;

“two mechanisms for price information disclosure would be the most useful and appropriate for implementation in the Victorian energy market, taking into account the maturity of the market and level of consumer knowledge and capacity to compare between offers.

These mechanisms are:

1. Disclosure labels; and
2. An online disclosure service, either -
 - Bill Calculator; or
 - Interactive price comparison service; or
 - Online marketplaces”¹¹

In its recent draft report on the effectiveness of retail competition the ESC also found that there is a need to improve the availability of relevant information to average customers, The ESC noted;

“Improvement of the availability and quality of market information provided to customers is necessary to increase their capacity and confidence in the market and to promote competitive conduct of the electricity and gas retail markets. The findings of the Commission’s survey of customers indicates that competitive market conduct would be supported by the provision of information enabling customers to:

- comprehend and compare market contract offers from competing retailers against each other and against the prevailing standing offers;
- understand the price and non-price benefits available under market contracts (in general terms); and
- recognise the availability of alternative retailers and the ease of the retailer switching process.

This information could be provided through a number of mechanisms:

- a regulatory approach may be to require retailers to provide market price information which complies with specified standards. As noted in section 4.2, the Commission released a consultation paper, Price Information Disclosure in the Competitive Energy Market in late 2003 and is currently preparing a Draft Decision on options for implementation; or

¹⁰ *The Power to Choose - Demand Response in Liberalised Electricity Markets*, The International Energy Agency (IEA), 2003, p. 40.

¹¹ *Price Information Disclosure in the Competitive Energy Market - Consultation Paper* October 2003, Essential Services Commission, page 11

- a (largely) non-regulatory approach may be for the government, the Commission or a not-for-profit or commercial organisation to provide direct price comparisons based on regularly updated market price offers and regulated standing offer tariffs presented in a standardised form to enable comparisons by customers of ‘average’ abilities. (Some regulatory role may be involved in ensuring the necessary accurate information is provided and the comparison data is presented in a meaningful way).”¹²

Compared to on-line price information, disclosure labels provide comparative and standardised information to customers at the time they receive an offer, including to those customers that do not have on-line capability. Price labels would most likely be in standard format based on consumption and a standardised annual cost. As noted above, the ESC is now considering how to implement such an approach, including an online comparison service in Victoria. The ESC suggests that any such approach be jurisdictionally specific.

¹² *Special Investigation: Review of Effectiveness of Retail Competition in Gas and Electricity*, Draft Report, Essential Services Commission, March 2004, page 93