



National Electricity Code – Victorian Full Retail Competition Metering Derogations

Position Paper

Intermoco Solutions Pty Ltd

The following paper summarises Intermoco's views in relation to the ACCC's draft determination to extend the Victorian Full Retail Competition Metering Derogations.

Environmental considerations are now a fundamental plank of government policy. The introduction of market forces and consumer preference into the electricity market is considered to be essential to the achievement of Government environmental policies and objectives for the electricity industry.

The main thrust of the ACCC Draft Determination promotes these objectives. Nevertheless, Intermoco has concerns that the Determination as it stands may need to consider other core objectives in order to deliver real economic and social benefits:

Intermoco believes that as part of any decision to extend the existing derogations that the following core objectives be considered:

- Early achievement of cost reflective pricing signals to consumers during periods of high peak demand
- The ability to instigate Demand Side Responses during high peak periods
- Avoided capacity costs for future generating, transmission and distribution systems and environmental considerations

These issues will be important in delivering real economic benefits to consumers.

The first step towards achieving these objectives has already been put in place with the mandated rollout in Victoria of interval meters commencing in 2006. Whilst interval meters will enable TOU tariffs to be developed and provide benefits we believe in order to deliver the full benefits, two-way communications (AMR) in conjunction with interval meters will need to be deployed for those groups of consumers where a net benefit has already been shown to exist. Specifically, the financial analysis in the ESC's position paper "Installing Interval Meters for electricity customers – Costs & Benefits" Nov 2002 identifies that there is an overall economic benefit in deploying AMR and two way communication to consumers using more than 10MWhr per annum.

For small consumers where the ESC position paper has identified smaller benefits, Intermoco supports the Papers suggestion that further trials and studies

be undertaken so that the benefits can be more accurately modeled and to take into account technology advances since that Paper was published..

Intermoco believes that if the Derogations are to be maintained then the ACCC should consider either mandating the rollout of AMR equipment or incentivising Metering businesses to install such equipment to those groups of customers for which the net benefits of two-way communications (AMR) clearly outweigh manual meter reading processes. For small consumers we recommend that field trials and further analysis be undertaken in accordance with the recommendations outlined in the ESC's position paper.

Concerns with the Draft Determination

We believe the ACCC's draft determination as it stands may need to consider other aspects in order to achieve the objectives above and to deliver real economic and social benefits:

- In order to deliver the full benefits of interval metering, AMR will need to be deployed. Effective price signaling can only be achieved with the use of real time AMR which will enable retailers to offer innovative tariff options, mitigating their risk profiles and ultimately resulting in lower energy charges, a more equitable user-pays system (reduce smearing) and the deferment of capital investment in network augmentation.
- In the absence of mandating AMR Intermoco believes that the ACCC's decision not to regulate type 5 metering installations which have remote reading capability may result in reluctance by network businesses to invest in innovative metering systems for fear of stranding assets or being unable to recover capital investment within an acceptable time period. The issue is that the benefits of AMR accrue across a range of market participants and to the community in general. However, the costs of deploying AMR are fixed on the provider. To date only Network businesses have demonstrated any interest in AMR and even this has been minimal and adversely affected by the fact that they make decisions based on the direct benefit accruing to them.
- The argument advanced by the ACCC is that the entity most likely to introduce innovative metering systems is the retailer. Our experiences to date, working with many market participants indicates that retailers have not shown a high level of interest in investing in new metering systems for low end consumers, which is the bulk of type 5 metering installations. (< 20MWhr/annum) The reasons are many and varied, including metering services being a non-core activity and a somewhat minor proportion of their business, recovering the metering costs within the contract term and excessive meter churn resulting in overall higher charges.

- The network businesses are best placed to advance the rollout of interval meters with remote comms for small consumers due to the large volumes and economies of scale which could be achieved. It is hard to see how retailers could achieve the same economies of scale.
- There are also other significant barriers to entry to the provision of metering services which provide a natural economic monopoly advantage to metering services providers attached to network businesses. Current levels of technology, customer acceptance and access, and the high cost of gaining NEMMCo accreditation all provide a natural economic advantage to the network businesses.

Key Objectives

The issues involved are complex and there are valid arguments supporting the extension of the derogation and also the ACCC views. However Intermoco believes that the most important outcome is:

- Early achievement of cost reflective price signaling;
- Consumer Demand Side Response DSR during periods of high demand, and;
- Avoided costs for future generation, transmission and distribution assets.

The need for real time response.

Intermoco believes that the key to achieving these objectives is to empower consumers with the ability to make real time choices on their consumption. Interval metering will provide the first step to providing consumers with the information on their consumption patterns, but this information will still only be available months later

Retailers armed with this new interval data may develop new TOU tariffs but it is difficult to see how major benefits can flow to consumers when information is not available in real time and they are unable to respond during periods of peak demand. Consequently, the ability of Retailers to mitigate their risk during these periods and hence pass on benefits to consumers will be limited.

This is a position which has also been advanced in a paper prepared by Pareto Associates for the Energy Action Group, "Smart Meters for Smart Competition – Will Current Proposals hand power back to consumers?" Update 2003.

"Relying on manual reading of interval meters is not much of an improvement on manual reading of accumulation meters because consumers would still have to wait weeks to find out what the impact of usage on time-of-use tariffs actually was."

Cost Benefit Analysis

The comparison of two way communications compared to manual meter reading has also been analysed in the ESC’s position paper by CRA/KPMG

In terms of commercial customers, the ESC Position Paper concludes that subject to the caveats therein:

“For all business customers the benefits of two way communication exceed the benefits in the case of manual reading for rapid deployment by \$128 million”. In respect of all business customers with usage exceeding 10MWh per year the net benefits for the communication technologies exceed the net benefits for manual meter reading for most deployment approaches”.

The associated financial analyses shows that for residential consumers using more than >10MWhr per annum with two-way communications that a net benefit would result. The report acknowledges that the benefits have been narrowly defined and recommends that further analysis and studies be undertaken. In any case, it is clear that benefits would accrue to consumer groups above a certain threshold. It is this group of consumers which Intermoco believes a mandated rollout of two-way communications should be undertaken.

In addition, Intermoco as a specialised supplier of innovative metering products have specifically developed a solution to address high density dwellings which contain collocated metering cupboards. In such installations a single communications device can be used, the cost of which can be amortised over the total number of meters within the cupboard. For this reason high density dwellings with collocated metering points result in a substantially lower price point to provide two-way communications.

Pricing Improvements

Intermoco believes that the cost estimates utilised in the CRA/KPMG paper should be reviewed in light of new advances in technologies and significantly lower price points which can now be achieved.

Intermoco estimates:

Configuration	Volume pricing Jan 05	CRA/KPMG cost estimate Nov 02
Street wide urban rollout utilising PLC – separate communications device for each meter	\$200	\$280
High density units with collocated metering – communications equipment amortised over 10 meters. (Assumes banks of 10 collocated meters)	\$160	N/A

- Based on 1 phase, 1 element interval meters
- Based on volumes of 75,000

- Includes supply and installation of meter & communications equipment
- No allowance for contactors – add \$35
- Excludes GST

Trial of new Metering Technologies

Intermoco believes that clear benefits would result by mandating the rollout of two-way metering communications for certain groups of customers. These are:

- Business consumers > 10 MWhr per annum
- Residential consumers >20 MWhr per annum.
- High density residential dwellings with collocated metering points

For smaller consumers Intermoco supports the recommendation of the CRA/KPMG report that various trials/pilots be undertaken in order to more accurately ascertain the benefits to these consumers.

A number of funding sources are available which could be used to fund a substantive pilot programme.. For example the following funding sources could be used:

- TransGrid's MetroGrid project: \$500M project to fund the upgrade Sydney's electricity infrastructure to meet future demand. A key aspect to the project to put in measures to minimize future augmentation of the network. This would represent an ideal opportunity to trial a Demand Side Management pilot.
- Department of Environment & Heritage - Solar Cities: \$75M trial of sustainable energy alternatives for urban Australia – 4000 sites. Smart metering will be required as part of the trial and could be easily extended to include a Demand Side Management pilot.
- IPARTs Report "Inquiry into the Role of Demand Management and Other Options in the Provision of Energy Services" October 2002 has resulted in the New South Wales Government establishing a Demand Management Taskforce to investigate ways of establishing a Demand Management Fund. Once established, this could represent a source of funding to pilot various demand management options.

Other regulatory initiatives should also be introduced to foster the development of AMR such as that adopted by West Australia:

West Australia has mandated the rollout of interval metering and AMR systems for all buildings more than 3 levels or which have restricted access or security systems installed (Western Power: WPC Policy and Technical Requirements for Automated Meter Reading (AMR) Systems). Whilst Western Power (WP) is not

part of the NEM, they are currently establishing an electricity wholesale market. The mandating of interval meters and AMR for larger building complexes will help WP obtain early benefits from the “low hanging fruit” in its move towards a potentially wider scale, interval meter rollout.

Recommendations

Intermoco supports the main thrust of ACCC Draft Determination but requests consideration be given by the appropriate regulatory authorities to mandating the rollout of two-way communications technologies to the following groups of consumers:

All business consumers >10 MWhr per annum
All residential consumers > 20MWhr per annum

In addition, Intermoco recommends that consideration be given to mandating the rollout of two-way communications technologies for residential consumers within high density buildings and building complexes with security systems in place as has been done in West Australia by regulation. Intermoco understands that such a decision may appear to be very selective in terms of targeting certain consumer groups but due to the substantial cost savings and much shorter cost recovery periods, such a decision is justified. Further it would also assist with driving innovation into a market which has clearly been slow to respond to new metering technologies.

For smaller residential customers Intermoco recommends that a substantial trial/pilot be undertaken in accordance with the CRA/KPMG recommendations in order to more accurately assess and quantify the benefits to these consumers.

Intermoco also recommends that the network businesses be incentivised through strong financial and operational incentives to deploy two-way communication technologies (AMR). Should the above be adopted then we would consider it acceptable that the derogations remain in place for type 5 metering installations.

Intermoco believes that extending the Derogations but making metering services with remote reading equipment contestable, may in fact delay the rollout of innovative metering products to small consumers by creating uncertainty within metering businesses based on the fear of installing stranded assets or being unable to recover metering costs over an acceptable time period.