

25 October 2007

Manager – MCE Secretariat
Department of Industry, Tourism and Resources
GPO Box 9839
CANBERRA ACT 2601

By email: MCEMarketReform@industry.gov.au

Dear Madam/Sir

Re: Smart Meters Cost Benefit Analysis: Phase 1 — National Minimum Functionality

Thank you for the opportunity to comment on the papers associated with Phase 1 of the Cost Benefit Analysis of Smart Meters. The Energy and Water Ombudsman (Victoria) (EWOV) understands the time constraints under which this analysis is being undertaken, but this was a short consultation period given the volume of papers made available for comment. Because of these time constraints, our comments are based on the consultation draft of the *Regulatory Impact Statement* and the paper associated with Stream 1: the *Overview Report*, prepared by NERA Consulting.

1. Introduction

Notwithstanding these time constraints and the volume of consultation material, EWOV appreciates the opportunity to make a comment on this paper because of the work it has carried out in recent years monitoring the issues raised in Victorian cases involving interval electricity meters that customers have brought to this office. Every case involving interval meters received in the 18 months between January 2006 and June 2007 has been analysed by EWOV so as to identify the groups of issues raised, trends and systemic issues. The results of this analysis have been set out in three reports, each covering six months. The Victorian Essential Services Commission (ESC) has received the full version of the reports with retailers and distributors identified for all cases. De-identified versions of the reports have been provided to the Australian Energy Regulator and Energy Safe Victoria, while distributors and retailers have also received the de-identified version but with the code that identifies the cases relevant to them.

EWOV's analysis is a valuable source of information as to the practical impact to date of interval meters on customers and, to some extent, electricity retailers. The reports also provide information on issues experienced by distributors, but it is exceptional for these cases to be taken against distributors, so that, although the distributors are the entities installing the meters in Victoria, they have been to some extent insulated from the consumer and retailer impacts. It should be noted that, with only a very few exceptions, the cases reported on by EWOV to date relate to manually read interval meters (Type 5). This submission contains key points and case studies drawn from those reports. If it is of assistance to the work of this cost-benefit analysis, EWOV is prepared to supply the de-identified version of the reports to the MCE on a confidential basis. EWOV's newsletter, *Resolution 23* (reporting on July to December 2006) contains a summary of the report for the first half of 2006 (p. 16). A copy is enclosed.
(http://www.ewov.com.au/pdfs/Resolution/Res%2023/7194_Resolution23_F.pdf)

The following points draw out some features of EWOV's reports:

- In each of the six-monthly periods for which reports have been compiled, there have been about 60 to 62 cases where the interval meter was germane to the customer's issue.
- Over 90% of these cases have been complaints received for full investigation. By contrast, typically around 60-70% of the cases we receive are enquiries or complaints that are referred back to the company because the customer has not given that company sufficient opportunity to resolve the matter. As such, our experience is that interval meter issues can have an intractable quality for electricity companies. A relatively high percentage of the interval meter complaints EWOV investigates are upgraded (around 11%), providing further evidence of the difficulties attached to resolving them.
- A number of issues stand out and these are relevant to the functionality of the meters. These issues are:
 - Loss of access to off-peak tariffs as a result of having an interval meter installed or, where an interval meter was already installed, as a result of a change of retailer;
 - Estimated bills based on substituted data. These bills are often delayed;
 - Customer frustration and anger with not being able to read the meter or reconcile the consumption data on the bill with the meter reading.

There are other issues as well, but the above issues are both the predominant ones and the ones that have implications nationally for the functionality of interval meters.

2. *The Regulatory Impact Statement (RIS)*

EWOV agrees that the objectives identified in the RIS (at page 16) for a national rollout of interval meters (if that is the outcome) are worthwhile, namely:

- 1. Reducing demand for peak power, with consequential infrastructure savings (e.g. network augmentation and generation)*
- 2. Driving efficiency and innovation in electricity business operations, including improving price signals for efficient investment and contracting*

3. *Promoting the long term interests of electricity consumers with regard to the price, quality, security and reliability of electricity*
4. *Promoting competition in electricity retail markets*
5. *Enabling consumers (including residential, business, low- and high-volume users) to make informed choices and better manage their energy use and greenhouse gas emissions*
6. *Manage distributional price impacts for vulnerable consumers*
7. *Promoting energy efficiency and greenhouse benefits*
8. *Providing a potential platform for other demand side response measures and avoiding discrimination against technologies, including alternative energy technologies*

Four of these eight objectives relate directly to consumers, either by being premised on a change of behaviour (1 and 5) or by providing benefits to consumers (3 and 6). This suggests that benefits and costs to consumers, both quantitative and qualitative, should be given particular weight in the overall analysis of the costs and benefits of interval electricity meters.

Given the constraints under which the RIS has been written, that is, in the absence of a completed cost-benefit analysis of the core functionalities and of a clear decision as to whether there is to be a national rollout, EWOV agrees with its broad analysis. Of the three options, canvassed at page 16 of the RIS, namely:

- A – the status quo, that is, jurisdictionally-decided rollout decisions with varying functionalities,
- B – allowing the market to decide smart meter functionality, and
- C – national minimum functionality and performance level,

Option C is clearly to be preferred. EWOV believes that it would be extremely unfortunate to allow another ‘rail gauge’ issue to become entrenched across jurisdictions, and that only a national rollout overcomes what the RIS describes as the split benefit problem. It is also a logical choice given the move towards more nationally consistent regulation. The question that arises is whether it is still a practical option, given the actions that have already taken place towards rollouts in various States.

3. *The Recommended Functionalities*

We note the close connection between work being undertaken nationally and the work on interval meter functionality that has been done in Victoria.

EWOV recognises that the core functionalities are not at issue in this consultation, but seeks to make a comment on one core function: number 4: local reading – visual display on meter¹. EWOV strongly supports its inclusion. Our case experience clearly shows that many consumers expect to be able to get information from their meter and to be able to use meter information to check their bills at least broadly. This particularly applies to business customers for whom electricity is often a significant expense. If this function is not included, consumers will lose something they currently have on accumulation meters,

¹ As set out in Appendix 1 to the *Overview Report, SMWG core functionality descriptions*, at p. 134-5.

an outcome that is unacceptable. It would be strange if the installation of an interval meter meant less information for consumers when the whole point of interval meters is the extra information they provide about consumption and the time at which it takes place.

Two case studies follow which illustrate customers' frustration and inconvenience at being unable to read the interval meter at their property:

*Case study C/2006/3450
(received 4 April 2006, closed 3 October 2006)*

The customer is the book-keeper for a retail business. She was not able to read the meter to check the usage against the bills. There is no visual display of cumulative consumption which she could compare with the figure on the bill. She had raised this issue on numerous occasions with Retailer 2 and also with the distributor (through Retailer 2), but had not been able to reach a resolution. She had asked Retailer 2 whether, if she may not have access to a probe, she could instead be contacted when the meter is read, so that she could have a look at the reading as well. Her job is to budget for her company's utility bills, which are quite large, so she would like to be able to look at the meter and keep track of usage. This case was resolved after six months; the distributor went to the business and explained how to scroll through the registers on the meter and also provided the methodology for reconciling the reading on the meter with what appears on the bill.

*Case study: C/2007/5821
(received 22 June 2007, closed 11 September 2007)*

Distributor 3 installed an interval meter at the customer's property. The customer was frustrated that he could not monitor his usage. The customer advised EWOV that when he raised his inability to monitor usage with the retailer, Retailer 3, it responded that "*no human being can read the meter, the data recording from the meter requires special e-coding that nobody can explain...*" (These words are the customer's report of what Retailer 3 said). The retailer's initial response was that the installation of the interval meter was not its doing and that it could not help, but the eventual resolution of the case was that the customer was provided with the information he needed to read the meter and monitor his usage.

EWOV notes the inclusion of the feature of a visual display on the meter will make a difference only to those consumers who actively seek out the information on how to read the meters and then do it. The feature will not present information to passive consumers.

In this context, EWOV also strongly supports functionality number 16: meter interface to home area network. It has been placed in the category of functionalities requiring further

study.² Part of the analysis is based on an estimate of ‘the potential range of additional demand response’, which relates to the number of consumers who accept a time-of-use tariff³ or direct load control devices for their air-conditioners, and the estimates of the potential range of demand response seem quite low.⁴

This is a point at which the *qualitative* benefits and costs for consumers should be given particular weight, and in support of this position, EWOV wishes to make several comments:

1. Although the estimate of consumers who would take up time-of-use tariffs is uncertain, it is going to be higher if there is the possibility of an in-home display than without it. Not to require an interface that would allow the use of an in-home display is to condemn a rollout to a very low possibility of achieving its first objective, reducing demand for peak power. EWOV suggests this is a threshold issue for a rollout of interval meters;
2. As a matter of principle, consumers are entitled to information about their electricity consumption. In any transaction in the marketplace, a buyer is entitled to, and unwise not to, verify what is being purchased. For most Victorian residential consumers, electricity bills currently arrive as large quarterly bills in arrears, making the task of verification particularly difficult. Just as consumers benefit from itemised telephone bills, so they benefit from detailed information about their electricity consumption. As stated above, EWOV’s case experience is that customers are frustrated and inconvenienced when they cannot obtain information from an interval meter;
3. The upper limit of the cost-benefit analysis seems to assume that retailers will provide in-home displays (either at no cost to the consumer or at an additional cost). The Victorian rollout is based on the assumption that if the possibility of an interface is provided, some consumers at least will purchase in-home displays from electrical shops or that the displays may be provided as part of a package that involves a shift to a time-of-use tariff;
4. The cost-benefit analysis seems not to have factored in that consumers will inevitably be facing increased charges for electricity, due to the increased costs of generation, especially at peak periods, because of water shortages. This may make time-of-use tariffs and critical peak periods more acceptable to more consumers, in return for lower off-peak prices; and
5. Retailer decisions (i.e. their cost-benefit analyses) on whether to introduce time-of-use tariffs are key to the success of the rollout. Without functionality number 16, meter interface to home area network, it is arguably less likely that retailers will offer time-of-use tariffs, because consumers will not have immediate access to essential information about what consumption is being charged at what rates. (There may be other ways retailers could inform consumers about critical peak

² *Overview Report*, pages 96-102

³ An example of a time-of-use tariff in Victoria at the moment is GH/GL which may also be called Winner or Home Saver). It involves charges at peak rates for usage between 7 am and 11 pm Monday to Friday and off-peak at other times. Time-of-use tariffs offered with interval meters may be more sophisticated, offering seasonally-based rates as well as time-of-day rates.

⁴ The bottom end of the range is zero, the top end – 3.6% for residential summer peak demand, p.99 of the *Overview Report*.

price times, such as text messages or mass media announcements but these will not have the immediacy of in-home display information.)

For the reasons stated above, EWOV strongly believes that functionality 16 — meter interface to home area network — should be included in the core set.

4. Performance levels

As stated in the introduction to this submission, a major cause of consumer complaint has been estimated bills and substituted data. It is to be hoped that this will be less of a problem with remotely read interval meters (Type 4) than it has been for manually read ones (Type 5). Nevertheless, EWOV suggests that there could be a performance or service level as part of the core functionality number 1 that sets out maximum amounts of substituted or estimated data that can be used in a customer's quarterly bill, except where a *force majeure* event happens. The suggestion is that it should be no more than a few hours per month.

The case study below involved the use of substituted data for about 10 months:

*Case study: C/2007/3729
(received 23 April 2007, closed 8 June 2007)*

An interval meter was installed at the customer's premises on 29 May 2006, and only substituted data was received from that date until 4 April 2007. Retailer 4 wrote to the customer in April 2007, saying that there had been a billing error and more was owing on the account, and the customer contacted EWOV, saying that she wanted quarterly reads rather than the annual read which she appeared to be receiving. Retailer 4 clarified that interval meters are read just as often as basic meters and that the problem in the case of this customer was data file corruptions occurring each time the meter reader attempted to download the data. Retailer 4 credited the customer with \$100 in recognition of the inconvenience she had experienced and provided the contact details for an interval meter specialist if she had further issues.

5. Recording of off-peak loads

EWOV notes that a core functionality is to be load management through a dedicated controlled circuit.⁵ The continuation of the capability of measuring the consumption of a particular appliance (a hot water service or slab heating) for those consumers who have these dedicated 'off-peak' appliances is vital if time and resources are not to be tied up in intractable complaints about the loss of a portion of the bill on off-peak rates or about a change to the basis of the off-peak billing.⁶ This has been a very significant issue in the complaints EWOV has dealt with about interval meters. Invariably they have been

⁵ Functionality number 8, included in the list of core functionalities at p. 9 of the RIS.

⁶ In Victorian terms, a controlled load off peak tariff is, for example, GD/Y6 which is a general domestic tariff plus controlled load hot water with six hours operation or GD/J8 which is general domestic plus slab heating (3 hours in the afternoon and 8 hours overnight) plus hot water (8 hours overnight).

difficult and prolonged issues. The retailer position has sometimes been to encourage the consumer to transfer to another retailer because it can do nothing given the capability of the meter installed by the distributor and/or associated data and billing systems. This has particularly affected non-local retailers, as illustrated in the following case study:

Case study: C/2006/6977

(received 6 July 2006, closed 28 August 2006)

The customer's property was fitted with an interval meter when she had the house re-wired in late 2004. Her electrician requested a two-rate meter for her hot water service, so that it could operate on dedicated off-peak rates. Four months after the new meter was installed, the customer transferred from Retailer 4 to Retailer 2. Her first bill from Retailer 2 was unexpectedly high and, when she queried it, she was told that she could not have off-peak because her meter was only producing a single stream of data and that the wrong meter had been installed. She went back to Retailer 4 and Distributor 1 to complain about this, but was told that because Retailer 4 was no longer the Financially Responsible Market Participant (FRMP) for the property, it would not change the meter. The case was resolved when the customer reluctantly transferred back to Retailer 4 (the local retailer), which has agreed to "tariff map" her account indefinitely so she receives a tariff that has both peak and off-peak billing. Retailer 4 also credited the customer's new account with \$300 in recognition of the inconvenience this matter had caused her.

It will be important in a national rollout of interval meters to be extremely clear that controlled load off-peak should not be replaced with time-of-use off-peak without the explicit informed consent of the consumer, and that distributors should not install single element meters where there has previously been controlled load off-peak billing. The minimum functionality should be expressed in a way that does not allow for this to occur. This is not to rule out providing incentives to consumers (and retailers) to change from controlled dedicated load off-peak to time-of-use off-peak and to reduce the number of off-peak electric hot water services in use.

We hope that these comments are helpful. If you have any queries, or wish more detail on any point, please contact Stephen Gatford, Manager Public Affairs and Policy, on (03) 9649 7599.

Yours sincerely



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