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Regulatory Review – Smart meters
Essential Services Commission
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To Whom It May Concern:

REGULATORY REVIEW – SMART METERS

DSE has a strong interest in this review given the usefulness of the data from smart meters for managing and reducing electricity use and the improvements this can lead to in terms of greenhouse gas emissions.

DSE is currently developing a whole of government environmental data management system for use by all Victorian government departments and agencies. The aim of this system is to reduce the administrative burden of collecting, verifying, analysing, managing and reporting environmental data such as electricity use.

Importance of data standards

DSE believes the lack of data standards for meter and billing data is a significant barrier to effective use of energy data in managing greenhouse gas emissions. Environment mangers currently spend a considerable amount of time dealing with the different formats of data currently available, reducing the amount of time that can be spent on implementing actions to reduce greenhouse gas emissions.

Opportunities to collaborate

DSE has investigated the use of data standards internationally and developed a report that we would be happy to share and discuss with ESC. We would also be happy to assist in the development of standards and improved methods of transferring data between distributors, retailers and customers such as the use of web services. These two initiatives, we believe, would greatly improve the ability of organisations to analyse and report on their energy use and most importantly identify opportunities for improving their environmental performance.

Please find below further comments on the review broken down by section.

S 3.2.1 Reviewing the bill

Verifying accuracy of the bill

- Whatever the tariff structure used, customers must be able to easily check applicable tariffs on a retailers website, to verify what they are being charged is correct on the bill.
- Introduction of Time of Use (TOU) tariffs – unregulated nature of retail market implies **unbundled** retail and network tariffs must be enforced i.e. the retail and network tariffs must be separate.
- The Commission should also consider standardised terminology and naming across network and retail tariffs, so customers can more easily compare alternative retailer offers.
- Improvement in consistency of the billing process itself is also required. There have been instances of **non-billing** by a retailer, where sites were not billed at all across successive quarterly periods.

Experience in the >160 market sector where interval meters have been used for some time shows customers can really drown in data; the availability of raw data in itself is not an issue. The issues have been and still are concerned with:

- Accuracy: anything between 5 to 12% of monthly bills contain errors; data gaps, incorrect tariffs, incorrect consumption figures (even though interval meters are recording and reporting the data!).
- Understanding: raw data (particularly the interval data) cannot be aggregated easily at desktop level. Development of system infrastructure should include (web based? Government/ESC-sponsored?) tools that can import and present data on a daily/weekly/periodic basis for comparison across different time periods, and to verify billed information.

Estimated and substituted data on bills

- Clear guidelines are required regarding estimated bills as this is an issue in the <160MWh market sector. The prevalence of estimated bills and subsequent re-billing is not an efficient business process for customers.
- A similar comment to the above applies to substituted data, clear guidelines are needed.

S 3.2.2 Managing daily consumption and costs

Customer billing cycle

- A default arrangement of monthly billing should be considered by the Commission. This improves cash flow to retailers and should reduce any risk of customer default due to the financial impact on them of large quarterly bills.
- Monthly billing should also reduce the impact on customers of **non-billing** by retailers; hopefully upgraded retailers' systems would pick up instances of sites not billed for two successive months rather than two or more quarters.
- Some customers (and retailers) might prefer an option of bi-monthly or quarterly billing, especially where electricity bills are relatively low as an example. The Commission could recommend that a retailer and customer can mutually agree an alternative billing cycle to the default arrangement if they so wish.

Graphical information on the bill

- Existing bills from retailers show a simple graphical comparison in any case, usually to the same quarter in the previous year.
- The requirement here is whether:
    - The 'smart meter system' itself includes a facility (e.g. web portal) to access, interrogate and compare usage data on a periodic basis selected by the customer (daily, weekly or whatever) or,
    - The retailers' billing system is upgraded to offer this capability to each customer.
- The Ontario smart price pilot example appears to represent a desirable model to follow.

Unbundling tariffs and charges on the bill

- Having separate network and energy tariffs is desirable, as in Victoria's deregulated energy market customers will be able to compare energy tariffs between retailers and against market trends.
- Re point mentioned above under s3.2.1 above, in the event of unbundling then standardised terminology and tariff band definitions must be introduced so customers are able to compare retail offers.

Access to historical billing data

A two-year availability period is sufficient as a default measure. Commercial customers and retailers should be able to agree other arrangements if they so wish.

Access to metering data

- Access to interval ('metering') data is essential for understanding usage patterns, although some means of aggregating and presenting data within the 'smart meter system' must be available to customers for this to be of any use.
- Customers with multiple sites will require access to meter data for all sites. Retailers or distributors must be obliged to provide data to such customers.
- Security is viewed as a significant issue in the context of a wireless network. The smart meters in themselves must be protected so network hackers cannot access and corrupt meter firmware/software, or remotely disconnect the meter.
- The retailer is the mandated face of the electricity supply industry for most customers. However, if distributors are responsible for smart meters and associated system architecture then there is some logic in arguing that they are responsible for interval data provision to a customer or that customer's nominated third party.
- Access to data for the customer or their nominated third party by website download is probably the most cost effective means of distribution.

S 3.2.3 Shopping around for a better offer

As mentioned elsewhere, standardised terminology and tariff structures is viewed as essential in order to be able to compare retail offerings, whether domestic or commercial. The industry itself may view this as too restrictive a request that would stifle competition. However the alternative, with limited or no standardisation risks creating a structural inability to compare retail offers; de

facto an uncompetitive market since customers would not be able to make and exercise a genuinely informed choice.

S 3.3, 3.3.1, 3.3.2 and 3.3.3 Remote disconnection and reconnection issues

- Again security considerations come to the fore. Any computer network is capable of being hacked, and as part of such a network smart meters are vulnerable – even if remote disconnection is an unintended consequence of a hack.
- System architecture must be such that it treats disconnection as an abnormal, non-routine event, and retailer-distributor requests for disconnection prompts a specific sequence of steps to ensure that appropriate checks are made regarding customer status.
- Some thought should be given to having a physical safeguard, for example key-operated switches for disconnection to become effective. This could also offer some protection against the wrong customer being disconnected.
- Disconnection/reconnection in the event of property sale/purchase should not be an issue – the retailer/distributor only needs to be notified of the date and time of transfer. Interval meters are capable of recording consumption either side of an agreed date and time of transfer.
- As no other practicable means appears readily available, supply information will have to be provided to new customers by the distributor. If necessary this should be by means of a sticker placed in the meter box. The only other route is for it to be provided by the builder, seller or landlord to a new customer as part of a 'moving in' pack of information, although this could not be mandated by the Commission as part of this review?

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Yours sincerely

Mike Gooey
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