



Prepayment Meters

Discussion Paper

Energy & Water Ombudsman NSW

25 July 2014

Prepayment Meters Discussion Paper

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PURPOSE OF THIS DISCUSSION PAPER

At the 2013 [National Energy Affordability Roundtable](#) there was divided opinion about prepayment meters (PPMs)¹. There was support for their introduction, with appropriate consumer protections, customer education and voluntary take up. However, concerns expressed about PPMs included the possibility that people unable to pay might ‘self-disconnect’ and go unnoticed in the system.

It was agreed that there is merit in supporting the exploration of options for introducing PPMs provided there is a focus on adequate consumer protections and incorporating best practice technologies and product offerings.

This paper aims to follow up the recommendation of the Roundtable to ‘initiate further discussion among stakeholders about prepayment meters.’ This paper includes information about the Australian experience of PPMs and some international experience and aims to canvas the advantages and disadvantages of PPMs.

RESPONSES TO THE DISCUSSION PAPER

Arising from the Roundtable discussion, EWON is seeking stakeholder views to initiate further discussion about prepayment meters. In particular we are interested in responses to a series of questions – see [Questions for Discussion](#) (Page 9).

Stakeholders are invited to provide written feedback and **the due date for submissions has been extended to Monday September 8**. Responses should be emailed to: discussionpaper@ewon.com.au

Please contact EWON to provide feedback or to discuss any aspect of this Discussion Paper.

Inquiries

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NEXT STEPS

EWON will collate the feedback for a report for publication and further discussion with stakeholders. The final report will be published on the EWON website www.ewon.com.au.

¹ The National Energy Affordability Roundtable Report to SCER is available here: http://www.ewon.com.au/ewon/assets/File/Reports/SCER%20Report_National%20Energy%20Affordability%20Roundtable.pdf

INTRODUCTION

Rising electricity prices have made customers increasingly aware of the importance of monitoring and controlling their energy usage. To ensure continuing supply, they must be able to pay their quarterly bills, but this is becoming an increasing challenge for many customers.

Traditionally, residential electricity bills are issued every 3 months in arrears of the consumption taking place. This means there can be a significant delay in customers receiving feedback as to how much energy they are using, with no opportunity to adjust their behaviour if their usage is higher than expected. This makes budgeting difficult. Customers might also have forgotten about the extent of their consumption during very hot or cold periods by the time they receive their bill.

It is timely to review the potential appeal for customers of a prepayment system for energy, as well as concerns that have been raised about such a system. Many customers are very familiar with the concept of prepaid mobile phones to safeguard against unexpectedly high phone bills.

It is important to note that there is a range of options to address problems of energy affordability, and prepayment meters are only one of these options. Other options include, but are not limited to, more frequent billing and more frequent energy consumption information (eg monthly billing, smart metering and associated products to help manage usage); well targeted and appropriate levels of government energy concessions and emergency relief assistance, effective retailer hardship programs, energy efficient information and education, access to more energy efficient appliances and energy efficient properties.

NATIONAL ENERGY CUSTOMER FRAMEWORK

The regulatory framework governing PPMs varies between the different Australian states and territories. Section 56 of the National Energy Retail Law provides that energy may only be sold via a prepayment meter system where its use has been permitted by a local instrument in a participating jurisdiction. To date both South Australia and Tasmania have passed the required enabling legislation.

For those jurisdictions that have adopted the *National Energy Consumer Framework* (NECF) the *National Energy Retail Rules (NERR)* set out a comprehensive set of consumer protections for PPMs (Part 8)². These [Rules](#) outline a range of system requirements for prepayment meters. Customers experiencing financial difficulties are protected by a number of provisions, including:

- the meters must not allow for self-disconnection other than between 10am and 3pm on a weekday
- they must provide an amount of emergency credit at a level equivalent to the average cost of 3 days of electricity
- if a customer has self-disconnected for longer than 6 hours more than 3 times in a 3-month period, the retailer must contact the customer to offer replacement of the meter with a standard meter, and a referral to their hardship program.

² The Rules are on the AEMC website: <http://www.aemc.gov.au/getattachment/6ac12042-6895-472d-a9c4-8776ac34cf7e/National-Energy-Rule-Version-1.aspx>

EXPERIENCE IN AUSTRALIAN JURISDICTIONS

Tasmania

Prepayment meters have been in operation in Tasmania since 1997. Aurora Energy offers Time of Use pricing, with different electricity rates at different times of the day, weekdays, weekends and different months of the year. Customers can reduce their energy costs by using appliances in the less expensive time bands.

Customers can purchase any amount of credit between \$5 and \$200 by taking their Smart Card to any Recharge Agent – these are typically located in newsagents, service stations and supermarkets.

Aurora Energy's meters have a back-up of \$18 Emergency Credit that customers can access if they run out of credit and cannot immediately get to a Recharge Agent.

Two tariffs are offered – a standard tariff, and a concession rate for customers with an eligible concession card. The concession tariff has no standing daily charge.

The report *Pre-payment meters in Tasmania: Consumer Views and Issues, August 2006*³ published the results of a research project commissioned by the Tasmanian Council of Social Service. While the vast majority of consumers who had chosen prepayment meters reported being happy with their choice, the Report contained a number of recommendations for improved consumer protections. Many of these recommendations have been included in the NECF NERR provisions.

Over a number of years, the Energy Ombudsman Tasmania advised the Australia & New Zealand Energy & Water Ombudsman Network (ANZEWO) that complaints about PPMs were few, and in fact some were about delays in being able to access a PPM.

Aurora Energy is not currently actively promoting the installation of prepayment meters for new customers, though it is continuing to support its existing customers.

South Australia

AGL conducted a three-month trial of PPMs in South Australia in 2002. These meters were operated via a smart card, which could be recharged at either an AGL shop or a BP service station. The meters were supplied with \$8 of emergency credit, which in 2002 was enough to power the house for two days.

The pilot was evaluated via 70 phone interviews. There was overall a 97% positive response to the trial – 69% were 'extremely satisfied' and 28% were 'fairly satisfied'. The main reasons given by customers for such high satisfaction were the meters were easy to use, gave greater control over the usage and spend on electricity, and there were no more unexpected large bills. Asked about the likelihood of changing to this new metering method, 72% of customers said they would be 'extremely likely' and 20% said they would be 'fairly likely'.

The most common time period for purchasing credit was every 4 weeks, and the amount of credit most commonly purchased was \$50.

³ *Pre-payment meters in Tasmania: Consumer Views and Issues* A research project carried out for the Tasmanian Council of Social Service by Urbis Keys Young, August 2006

11% of customer reported that they ran out of credit and had to activate the emergency credit - however the reasons were more related to difficulty in accessing a recharge location for the smart card rather than inability to pay.

Northern Territory

A report published in February 2013⁴ noted that there were over 8500 pre-payment meters in the Northern Territory, mostly in Indigenous communities, town camps and public housing residences where tenants have expressly requested them. They were also common in similar communities in Queensland, South Australia and Western Australia.

Payment is made via a single use cardboard card with a magnetic strip, purchased by customers at their local store. Card values vary between \$5 and \$50. Once loaded into the meter, electricity can be used up to the value of that card and if the credit runs out the meter discontinues supply. Most prepayment meters also include a small emergency credit buffer of around \$5 to \$10, which is repaid next time the meter is credited.

The report noted that production of the conventional prepayment meters used in Australia would likely be replaced by smart meters over the next 3-5 years as part of the broader roll out. Also the report suggested that governments and utilities need to consider the format of the feedback from smart meters so it is tailored to meet the specific needs of Indigenous households, to deliver energy efficiency and reduced cost outcomes.

Frequency of reported self-disconnections was high – half the respondents reporting this occurred at least once a week, with outages lasting for several hours. Households adapted to frequent disconnections by not purchasing fresh food in any quantity, relying instead on local convenience stores on a meal-by-meal basis. Some problems were reported in accessing the power-cards, with local convenience stores often selling out. Many households experienced periods of increased energy costs during extended family visits, which meant the burden of electricity costs fell disproportionately on the small number of income earning adults. Despite this, there was a high degree of user satisfaction with pre-payment meters.

Queensland

The Queensland Council of Social Service (QCOSS) is soon to release a report on a research project into card operated meters in remote Indigenous communities in Queensland. The report will be available on the QCOSS website. QCOSS found the residents surveyed preferred prepaid card meters compared to standard quarterly billing arrangements as they were able to avoid building up debt, however there were issues identified such as widespread incidences of self-disconnection and barriers to ensuring adequate hardship protections (including concessions and emergency relief payments) were extended to consumers with the card operated meters in remote areas.

New South Wales

The Smart Grid Smart City project has recently completed a pilot project utilising smart meters, offering a product called 'Budget Smart'. This aims to promote payment in advance, by giving

⁴ *Pre-payment meters and Energy Efficiency in Indigenous Households*: A research project undertaken by Bushlight, the Centre for Appropriate Technology, and supported by the Northern Territory Government 2011-2012 Climate Change Grants program.

customers a discount of 12.5% on their bill so long as the account stays in credit. Customers will be sent an SMS when the credit balance is running low. Unlike traditional PPMs which will self-disconnect when the credit runs out, the only consequence of failure to top up the credit in this program is that the discount will not continue. This is a variation on the prepayment idea.

EXPERIENCE IN INTERNATIONAL JURISDICTIONS

New Zealand

Various forms of prepayment meter arrangements have been in place in New Zealand for some years. One particular retailer, Glo-bug has made this a particular focus. Over 90% of their customers choose to have an In-Home Display (IHD), at a cost of \$70, to assist with monitoring their usage. This IHD has a top that changes colour depending on the account balance:

- green means that there is more than \$10 credit remaining
- orange warns that the account balance is less than \$10 and that supply will be disconnected at midday the following day if not topped up
- red is an urgent warning that supply will be disconnected at midday that day. Once supply has been disconnected, the device ceases to glow.

Account payment can be made by several means: a payment card which can be topped up in numerous locations around New Zealand; by phone; via the Glo-bug website or a mobile phone app. The minimum amount required to re-activate the account is \$20.00.

Glo-bug states that only 0.1% of its customer base experience disconnection from running out of credit, compared to the industry average of 0.65%⁵. They estimate that customers who struggle to make their payments would save on average \$250 per year from avoided costs from late fees and disconnection fees.

The report *Empowered? Examining self-disconnection in a postal survey of electricity prepayment meter consumers in New Zealand*⁶ details a nationwide postal survey of consumers undertaken with the support of three major electricity retailers. This investigated the advantages and disadvantages of using prepayment metering from a consumer perspective.

The study found that while almost all respondents felt the benefits of using prepayment outweighed the risks of running out of credit or 'self-disconnection', 53% of respondents experienced self-disconnection in the past year. Of concern, over a third of respondents experiencing self-disconnection were without electricity for more than 12 hours. The frequency of self-disconnection was also high, with 17% of those disconnecting reporting six or more events in the past year.

The report concluded that government intervention could reduce the risks and disadvantages involved with using prepayment metering, which could then support initiatives aimed at reducing fuel poverty.

⁵ Glo Bug Information provided to the Energy & Water Ombudsman NSW, April 2014; also referenced in public information such as Mighty River Power's *13 March 2014 Business Update*, available at:

http://www.mightyriver.co.nz/PDFs/Presentations/MRP-Select-Committee-2014_presentation_final.aspx

⁶ *Empowered? Examining self-disconnection in a postal survey of electricity prepayment meter consumers in New Zealand*, *Energy Policy*, Volume 52, January 2013, Pages 277-287

Kimberley C. O'Sullivan, Philippa L. Howden-Chapman, Geoffrey M. Fougere, Simon Hales, James Stanley

The New Zealand Medical Journal published a further analysis of the same report.⁷ It was noted that among prepayment customers, households with children experience greater levels of hardship. These households were more likely to cut back on food and groceries, with flow on effects for health and well-being.

United Kingdom

It is estimated that 4 million people in the UK have a prepayment energy meter for electricity and 3 million for gas. Customers pay using a token, key or smart card which can be charged up at local stores. They are common in tenanted properties.

In a Customer Workshop conducted on behalf of Ofgem⁸ in 2007⁹ participants indicated that they generally top up their meters weekly, with most using the emergency credit facility from time to time.

An Ofgem Press Release from June 2007¹⁰ noted that several retailers offered special deals for prepayment customers, but these customers remained largely unaware of the benefit of switching. The potential savings were estimated at around £100 per year, and a campaign was launched to encourage customers to investigate their options.

A 2011 report from the independent review of fuel poverty in the UK reports that the difference between PPM and standard credit costs has now narrowed, but those on low incomes remain least likely to be on the cheapest direct debit tariffs. Since 2008 the traditionally higher premium paid by those on PPMs compared to customers on standard tariffs has decreased and there is now more standardisation of prices between the different payment methods (of standard credit or prepayment or direct debit)¹¹.

Traditionally PPMs were more expensive than the other methods so lower income households with PPMs faced some of the most expensive costs¹². The report attributes this price differential to the different costs faced by the supplier for each method, and PPMs had greater costs associated with buying and servicing the meter, as well as managing the administrative payment system.

Where customers with prepayment meters had switched supplier following a door to door marketing sale, almost as many switched to a worse as to a better deal.¹³ This was due to the confusing and complex nature of the energy market, with too many options to choose from and it being too difficult to compare and understand the different offers¹⁴.

South Africa

Prepayment meters were originally introduced to assist with the introduction of electricity to rural areas, where the costs of managing conventional meters (meter reading, billing and meter repairing)

⁷ *Kids in the cold: outcomes for New Zealand households with children using prepayment meters for electricity.* O'Sullivan, Howden-Chapman, Stanley and Hales, NZMJ 15 March 2013, Vol 125 p 71

⁸ Ofgem is the Office of Gas and Electricity Markets and is the independent Regulator in Great Britain.

⁹ <https://www.ofgem.gov.uk/ofgem-publications/57454/prepayment-meter-customer-workshop.pdf>

¹⁰ <https://www.ofgem.gov.uk/ofgem-publications/76501/ofgem28.pdf>

¹¹ *Fuel Poverty the problem and its measurement, Interim Report of the Fuel Poverty Review*, John Hills, 2011, commissioned by Department for Energy and Climate Change (DECC), Page 8, and Chapter 2 pg46-50

¹² *Ibid*, page 46

¹³ *Ibid*, Page 63

¹⁴ *Ibid*, page 47

were considered prohibitive. By 2000, approximately 3.2 million prepaid meters had been installed.¹⁵ The original meters worked via ‘use-once-and dispose’ tokens. These were either disposable paper cards with a magnetic strip, or a strip of paper with a 16 or 20 digit number which the customer then keys into a keypad on the face of the meter.

ADVANTAGES AND DISADVANTAGES OF PREPAYMENT METERS

From the experience of other jurisdictions, EWON has identified the following advantages and disadvantages of PPMs. Stakeholders may want to comment on these in their responses or advise of other advantages or disadvantages not covered here.

The advantages and disadvantages of PPMs need to be considered in the context of the ‘post pay’ system of electricity supply. Under a post pay system, traditionally quarterly in arrears, many people struggle to pay their bills. Many customers accumulate large arrears and many experience disconnection. It can be difficult for some customers to arrange reconnection in the face of large arrears. Inability to pay large arrears can lead to debt collection action and credit default listing.

Advantages

A 1. Facilitating effective budgeting

- 1.1. It can be a useful way for customers to budget, including those customers on a low income. Customers can pay smaller amounts as they go, rather than having to pay a much larger amount for the previous 3 months usage within 10 days of receiving the bill.
- 1.2. Many customers on low incomes are already familiar with budgeting in advance of receiving their quarterly bill, by the use of regular Centrepay deductions.

A 2. Delivering timely consumption feedback

- 2.1. Customers receive feedback as to their energy usage, in close to real time, and can try to adjust their consumption accordingly. Customers generally come to understand their household usage within a short time through using a PPM.

A 3. Sharing the energy cost burden more fairly

- 3.1. For shared households it provides a fairer and easier way for all to contribute, rather than having a quarterly account in just one person’s name.
- 3.2. For households where there are short term visitors, it can provide an easier way for all to contribute rather than the increased energy costs being borne by the account holder at the end of the billing period.

A 4. Preventing arrears, credit action and high reconnection costs

- 4.1. Customers cannot build up high arrears, which then prove difficult to pay, and can result in debt collection action and a credit default listing.
- 4.2. In the case of disconnection, customers can be back on supply for a small amount

¹⁵ *An assessment of South African prepaid electricity experiment, lessons learned, and their policy implications for developing countries* D.D. Tewaria, Tushaar Shah, Energy Policy 31 (2003) 911–927

of money. This contrasts to the much higher requirements for customers who have accumulated high arrears on a post-pay account.

- 4.3. Customers can repay debt, by agreeing to a certain percentage of each top up being applied to a debt (Glo Bug in New Zealand offer this)
- 4.4. Customers avoid additional fees associated with late payment, disconnection and reconnection. However, some jurisdictions have a range of other fees associated with PPMs eg billing enquiry fee, card recharge fee, card replacement fee.
- 4.5. No credit check is required for PPMs, so customers with a poor credit history are not prevented from opening an energy account.

Disadvantages

D 1. Causing disadvantage from disconnection

- 1.1. Customers who lose supply when they cannot afford to buy credit may experience personal/household disadvantage from not having their electricity supply (eg, food spoilage; no heating/cooling, lights, hot water etc) until they are able to afford reconnection.

D 2. Reducing disconnection visibility

- 2.1. Customers who lose supply when they cannot afford to buy credit may not be visible to agencies, such as community welfare services, that may otherwise provide assistance.
- 2.2. Customers must keep checking the balance left on the meter, or risk running out of energy.

D 3. Payment challenges

- 3.1. For some customers on low incomes, there may be some resistance to paying in advance for electricity, seeing this as a benefit for the retailer rather than for themselves.
- 3.2. Customers without access to the internet or a mobile phone may only have limited options for making top up payments.
- 3.3. Where payment is by way of a charge card, access to a recharge point may not be convenient – they may not be open at all hours, and for remote and rural customers there may be costs involved in getting there.¹⁶

D 4. Compromising benefits of competition

- 4.1. Competitive tariffs may not be available, so customers on pre-payment meters may end up paying more for their energy.
- 4.2. Customers cannot access discounts for paying on time, or by direct debit, which are available to other customers, even though the retailer has the benefit of their paying in advance for the energy.

¹⁶ It appears that in some jurisdictions customers cannot obtain a PPM unless they are within reach of top up facilities.
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D 5. Ensuring access to rebates, relief schemes and hardship programs

- 5.1. Government and retailers would need to adapt systems and information to ensure eligible customers have access to government assistance such as rebates, concessions or relief schemes (NERR Part 8, Rule 129 (8)).
- 5.2. Retailers would need to adapt their hardship policies and programs to be able to offer assistance to customers with PPMs experiencing financial hardship (NERR Part 8, Rule 141).

QUESTIONS FOR DISCUSSION

Stakeholders are invited to provide responses to the following questions, and raise any other issues relating to PPMs.

1. Are the protections in the National Energy Retail Rules sufficient to protect vulnerable customers? In particular:
 - (i) Are there sufficient mechanisms in place to identify vulnerable customers for whom prepayment meters are not an appropriate option? See Rules 140, 141.
 - (ii) Is a trial period of three months sufficient for a customer to assess whether or not this suits their circumstances? See Rule 130.
 - (iii) The combination of emergency credit, and the prohibition on disconnecting after 3pm and on weekends could potentially mean that significant arrears could accumulate on a prepayment meter? Could this present a potential problem? How would such arrears be managed? See Rule 129 (2).
2. Who should bear the cost of the installation of a pre-payment meter, or the removal of a prepayment meter and installation of a standard meter at a customer's request?
3. If the introduction of prepayment meters were to be a retailer-led initiative (as it has been proposed for smart meters in NSW) could this present a problem when a customer wishes to change retailers? Are there issues for customers who have a PPM and want to switch retailers or move into a property with a PPM and do not want one?
4. Are there any barriers to customers with a prepayment meter having access to a range of competitive tariffs?
5. As retailers have the benefit of receiving payment in advance for energy consumed, is there a case for retailers offering a discounted tariff along the lines of a 'pay-on-time' discount?
6. How would retailers and/or the jurisdictional state and territory governments comply with the requirement of Rule 129 (8) that the prepayment meter system must have the technical capacity to deliver to the small customer the benefit of any government funded energy charge rebate, concession or relief scheme to which the customer is entitled?

7. Are there any safety issues connected with self-disconnections that are different from or additional to safety issues with disconnection under post pay arrangements?
8. Could smart meters potentially provide all the same functionality of a prepayment meter?
9. What changes (if any) may be required to the current AEMO Metrology Procedures to allow for the introduction of prepayment meters?
10. What changes (if any) may be required for Chapter 7 of the AEMC National Electricity Rules Metering Rules or Chapter 19 of the National Gas Rules to allow for the introduction of prepayment meters?
11. Which modes of payment would have most appeal to customers:
 - a 'smart card' that could be topped up at numerous outlets such as supermarkets, newsagents, service stations
 - payment via mobile phone
 - payment via the internet
 - all of the above.
12. Are there sufficient mechanisms for the Australian Energy Regulator to collect information on the self-disconnection rates, so as to inform ongoing energy policy?
13. Would the jurisdictional state and territory governments have any role in monitoring the performance of pre-payment meters, and if so what form would that take?
14. Do you have any other comments or issues to raise about PPMs?