KPMG

Essential Services Commission of South Australia

Consumer issues with pre-payment meters

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Contents

1 Executive summary

There is a growing use of pre-payment meters (PPMs) for electricity supply in a number of countries throughout the world. This report presents a range of consumer issues in relation to PPMs for the consideration of the Consumer Advisory Committee of the Essential Services Commission of South Australia (ESCOSA).

1.1 South Australian context

The following features of the South Australian situation provide the context for this report:

- full retail contestability (FRC) in the electricity market, introduced on 1 January 2003;
- the high electricity retail prices in South Australia relative to other jurisdictions in Australia;
- consumer protection mechanisms currently in place, such as billing information, payment plans used by one quarter of consumers, disconnection limitations and arrangements for dispute resolution;
- energy concessions, both ongoing and one–off, which are made available by the South Australian Government;
- the availability to Centrelink beneficiaries of the Centrepay system for fortnightly payment; and
- the results of AGL's trial of PPMs conducted in 2002.

1.2 Potential consumer benefits of PPM

The main benefits associated with PPMs that have been identified from a review of the literature are:

- an increased ability for consumers to monitor and adjust electricity expenditure, as the PPM can provide real time information on usage rates and costs;
- avoidance of large bills, as PPMs allow consumers to pay for electricity in more frequent, smaller increments;
- allowing payment to be better aligned with electricity consumed, thus avoiding overpayment resulting from either estimated meter readings, where the meter has not been able to be read, or errors in meter reading;
- avoidance of disconnection/reconnection fees charged under other arrangements to consumers who cannot afford to pay their electricity bills;
- eliminating the need to accommodate meter readers for security conscious consumers;
- providing a convenient way to repay debt, where a portion of the consumer's credit purchase will automatically go towards repaying previous debt; and

- the ability for consumers to be offered more flexible tariff structures, for example time-of-use tariffs, where that functionality is provided by the PPM and the retailer chooses to offer a more flexible tariff.

However, in many cases these benefits are not exclusive to PPMs; they may be delivered through alternative mechanisms.

1.3 Consumer groups most affected by PPMs

There are particular consumer groups who may be vulnerable to negative impacts of PPMs because of particular aspects of their situation. These are:

- those on **low incomes** who are often required to "juggle" bills, and therefore will defer payments and periodically get into bad debt situations. This juggle can force a low-income household to choose a short term saving to make the immediate household budget balance although it may be a more costly option in the longer term. In addition, low income households spend a greater proportion of income on electricity than those on higher incomes. Twenty three per cent of those on the lowest income quintile report not being able to pay their utilities bills on time and five per cent report being unable to heat their home adequately. This means that issues in relation to how much is paid for electricity are critical;
- **older people**, who are increasingly living independently for longer than was previously possible but who, in a number of cases, may be frail, have complex health needs or live alone;
- those with **special health needs** who may consume energy at high levels to control temperature or operate necessary equipment;
- those using **social housing or the pool of lower cost rental accommodation** who are more likely to move residences more frequently than those in other housing tenures;
- those from **culturally and linguistically diverse backgrounds** where English proficiency may be a barrier to clear understanding; and
- those living in **rural areas** who do not have the same access to services as those in metropolitan areas.

These categories are not mutually exclusive and many consumers will be described by a number of the following characteristics. Many older people, for example, will be on low incomes and may have special health needs. The low income characteristic is also likely to intersect with those using social housing or the pool of lower cost rental accommodation. As a general rule, the greater the number of the above factors that describe a consumer's situation, the greater their vulnerability to issues associated with PPMs.

1.4 Consumer issues with PPMs

A range of concerns with PPMs has been identified which may have significant consequences for these vulnerable consumer groups. These concerns are identified in the following sections.

A number of technical and regulatory considerations are presented in the report for dealing with these issues. These are summarised in the table in section 1.5. Options have also been put forward for monitoring the concerns outlined and data items that could be collected are presented along with suggestions of where a watching brief should be kept on certain technical developments.

1.4.1 The consumer's ability to make informed decisions about PPMs

The consumer's ability to make informed decisions about PPMs can be eroded by:

- inadequate information to the consumer about PPMs, particularly in relation to usage and fixed costs, disconnection and complaints mechanisms;
- an inability to compare tariffs offered under PPMs with other options; and
- loss of electricity bill information, especially the detailed information that shows comparative information for the current and previous year's average daily usage.

1.4.2 Costs of PPMs

Consumer concerns in relation to the costs of PPMs relate to:

- the full costs of PPMs being generally higher than other metering options;
- the cost not being commensurate with the reduced level of service from the retailer to the consumer, and the increased responsibilities for consumers with a PPM installed. These responsibilities include monitoring the meter, purchasing credit and recharging the meter with credit;
- retaining energy concessions for eligible consumers where there may be no automatic mechanisms built into the system for providing them;
- the inability to retrieve credit, both during the term of the PPM arrangement and on exiting the system;
- linking past debt and current consumption. In a number of countries where PPM technology has been introduced, it has been designed in part to deal with bad debt problems by preventing such problems recurring and by providing a mechanism for the retailer to retrieve past debt owed. Specifically the concern is that, if a household could not keep up with electricity costs under past billing arrangements, they are unlikely to be able to do so under the PPM arrangement, especially where they also have the debt repayment burden;

- entry and exit fees and transaction fees incurred when credit is purchased;
- the potential for debt accumulation when no service is provided where a fixed daily fee is charged;
- costs incurred by the consumer in purchasing credit, in terms of time, travel costs and inconvenience ; and
- the accuracy of PPMs.

1.4.3 Disconnection

While some consumers are currently disconnected due to non-payment of their electricity bills, disconnection may occur more frequently when a PPM is installed. The risk of disconnection associated with PPMs is therefore a major consumer issue. Specific concerns relate to:

- the significant health and safety implication in the event of a suspension of supply;
- the inevitability of disconnection in very vulnerable households where debt juggling is a routine part of financial management for many;
- the amount of emergency credit, which needs to be high enough to give consumers a reasonable amount of time to purchase credit but low enough that the consumer doesn't incur too much debt on emergency credit;
- the onus placed on the consumer to avoid disconnection, which can be the result of a deliberate decision or could be inadvertent; and
- the risk of a disconnection due to a meter fault.

1.4.4 Consumer's operation of the system

Consumers with PPMs installed are required to have a much more active involvement in ensuring their electricity supply is ongoing than under other types of metering arrangements. This leads to the following concerns:

- the onus on the consumer to, for example, regularly monitor credit levels, purchase credit and recharge the meter;
- access to points of sale for credit;
- location of meters;
- physical operation of the system which depends on the consumer being able to read the display showing credit status and to operate the technology to recharge with credit; and
- understanding how to operate the system, especially the emergency credit capacity.

1.4.5 Coercion

The potential for consumers to be coerced into installing a PPM has been identified by a number of consumer advocates. Specific issues relate to:

- coercion to install a PPM which may be applied by retailers to consumers with a bad debt history;
- pre-existing meters in a property providing an incentive for the consumer to maintain this metering arrangement;
- coercion by village/park owners who may install PPMs so that tenants have no choice about their metering arrangement;
- barriers to switching metering technology as a result of the cost of switching meters, or debt which is being paid off through the PPM; and
- barriers to switching retailer for consumers in debt or in situations where PPMs are not offered by all retailers.

1.4.6 Over-arching consumer protection issues

Two major systemic issues identified in the course of this research are:

- the hidden nature of fuel related poverty where PPMs are installed, as the rates of disconnection are not necessarily recorded and the aggregate effect on consumers is therefore not measured; and
- the absence of an effective safety net for PPM consumers. In arrangements, such as quarterly billing, their relationship with the retailer, the requirements of the Energy Retail Code and retailer hardship policies, allow the consumer to negotiate additional time to pay if there are financial problems. This provides one level of safety net for consumers having payment difficulties. The Emergency Energy Payment Scheme also provides some protection, although stringent eligibility criteria apply and limit the assistance available. In contrast, there are typically no safety nets provided under the PPM after the emergency credit has been used.

1.5 Conclusion

Impacts of PPMs will be of varying relevance across the consumer groups identified. In addition the overall impact of PPMs will depend on the needs, preferences and situation of the specific consumer.

Different PPM technologies address different consumer concerns but no one technology emerges as a way to address all the issues identified. Likewise some, but not all, of the above concerns can be addressed through regulation to protect the consumer. The roles of technology and regulation in responding to the identified issues are summarised in the table that follows.

Issue	Brief description	Significance	Technical considerations	Regulatory options
Ability of the consumer to make informed decisions				
Inadequate information provided	Consumers may not have enough information to make an informed choice about installing a PPM.	High	Not applicable.	▪ requirement on the retailer to provide information ▪ requirement on the retailer to have an approved PPM Code of Practice ▪ ESCOSA could provide information to consumers
Inability to compare tariffs	PPM tariff might not be easily comparable with other tariff options.	High	Some PPM technology contributes to this issue as it enables more flexible tariff structures to be offered e.g. time-of-use. Technology cannot address the comparability issue.	▪ PPM tariff structure could be the same as at least one other non-PPM tariff structure ▪ retailers could provide consumers with a comparison of electricity costs under different tariff arrangements ▪ include PPM tariffs in ESCOSA's price comparison service
Loss of electricity bill information	PPM consumers might lose important information that would normally appear on bills, particularly a comparison of the current and previous year's average daily usage.	Medium	Some PPM technology can provide consumers with historic consumption and/or payment information.	▪ retailer could provide periodic statements ▪ requirement for retailers to provide statements on request and free of charge ▪ requirement for consumers to have access to historical information
Cost of PPMs				

Issue	Brief description	Significance	Technical considerations	Regulatory options
PPM tariffs and fixed costs are higher than other options	There is a range of factors which impact on the costs of PPMs. Generally PPM costs are higher than those associated with a basic meter.	High	Choice of technology can have a significant impact on costs, but choice of technology might be limited by regulations.	▪ market-based PPM tariffs combined with regulation about consumer information ▪ smearing of PPM costs across other consumer groups ▪ regulation of PPM tariffs
Cost not commensurate with a lesser service	Some consumers might view a PPM arrangement as providing a lesser service because it shifts tasks from the retailer to the consumer	Low	Choice of technology can have a significant impact on costs but cannot reduce consumer responsibilities.	As above in relation to costs. Regulation cannot reduce the consumer tasks under a PPM system
Retaining energy concessions	Over a quarter of South Australians receive an energy concession. Assurance is required that the PPM system will allow eligible consumers to receive concession entitlements	Low	Most PPMs can accommodate concessions.	▪ energy concessions for pensioners can be received via a reduction in the daily fixed charge. (Note that this is only workable where the daily fixed charge is greater than the daily concession.) ▪ to ensure that energy concessions continue to be received by beneficiaries, a print out is required from the vending outlet which can be taken to FAYS for reimbursement of the concession ▪ consumer could be provided with an initial statement confirming they are receiving a concessionary rate

Issue	Brief description	Significance	Technical considerations	Regulatory options
Inability to retrieve credit	The retailer might not refund credit if the consumer is moving or changing meter, or if they wish to retrieve credit to pay for other services.	Low	Some PPM technologies make it easier for the retailer to determine how much credit remains.	▪ requirement for retailers to refund remaining credit on moving properties or leaving the system ▪ a maximum limit of credit that can be purchased by the consumer at any one time
Linking past debt and current supply	Consumers with bad debt histories may be forced onto a PPM system and, in addition, may be required to repay debt through the PPM. The latter situation particularly increases the risk of disconnection.	High	PPMs allow debt to be recovered via the meter. There are a number of options as to how this can be achieved, but all link debt recovery to current supply.	▪ no coercion of consumers with debt onto a PPM ▪ consumers with debt cannot move onto a PPM ▪ no debt can be repaid by a PPM ▪ restrictions on the amount of debt that may be recovered by retailer ▪ if consumer elects to repay debt via a PPM, requirement for retailer to provide information to consumers on options
Entry, exit and transaction fees	Entry, exit and transaction fees may be charged in addition to the PPM tariff. Prospective consumers may not be aware of these fees.	Medium	None.	▪ require effective disclosure of fees ▪ place a cap on fees

Issue	Brief description	Significance	Technical considerations	Regulatory options
Potential for debt accumulation when no service provided	When a fixed daily fee is charged, credit is consumed even when electricity is not. Unplanned disconnection may result.	Medium	All PPM technology allows for a fixed daily charge. Use of load limiting feature can ensure there is a minimal supply when there is no credit and/or emergency credit remaining (for the fridge, for example).	▪ PPM tariffs could only have a usage charge ▪ load limiting could be mandatory
Cost and onus on the consumer to purchase credit	Consumers are required to spend time and possibly money on trips to purchase credit for PPMs. The onus is on the consumer to purchase credit to prevent disconnection.	Medium	Some PPM technologies require consumers to purchase credit at physical outlets while others also allow credit to be purchased via the telephone or internet.	▪ consumers are provided with information about vending outlets before a PPM is installed ▪ specify the business hours of vending outlets ▪ specify the maximum distance from a vending outlet
Accuracy of meters	PPM meters may not be as accurate as other metering options. There is also a risk that metering faults will not be detected through validation, giving rise to inaccurate charging.	Low	Some PPMs do not meet the meter accuracy requirements in the Australian Standards. Some PPMs allow remote indication of a fault.	▪ specify the accuracy requirements of PPMs ▪ only allow PPMs which meet Australian Standards to be used ▪ specify timeframe within which PPMs are repaired ▪ require remote indication of a faulty PPM
Disconnection				

Issue	Brief description	Significance	Technical considerations	Regulatory options
Health and safety implications of suspended supply	Electricity is an essential service, and there may be significant health and safety implications in the event of disconnection.	High	Some PPMs allow emergency credit, load limiting and a limitation on the timing of disconnection.	▪ not allow PPMs to be used where life support equipment is used ▪ the same limitations on disconnection times for consumers with conventional meters and PPM meters ▪ require provision of emergency credit ▪ require load limitation for a certain period after credit has run out ▪ require load limiting once emergency credit has expired
Inevitability of disconnection in very vulnerable households	Vulnerable households are likely to face increased frequency of disconnection with PPMs.	High	As above	As above
The amount of emergency credit is inappropriate	The emergency credit might not give consumers enough time to purchase credit or might allow too much debt to accumulate.	Medium	Some PPMs do not allow emergency credit.	▪ set the level of emergency credit to apply to all consumers ▪ set a separate level of emergency credit to apply for vulnerable consumers
Onus on the consumer to avoid disconnection	Consumers may be disconnected due to error and forgetting to recharge credit.	Medium	Most PPMs provide an audible and visual warning when credit is low. If the meter is outside, the consumer may not note the alert. Some PPMs can be installed as split meters so the meter display can be conveniently located.	▪ convenient location of meters ▪ requirement to provide useful operating instructions ▪ requirement to provide audible and/or visual warning when credit is low

Issue	Brief description	Significance	Technical considerations	Regulatory options
Disconnection due to a meter fault	The risk of disconnection arising from a fault may be higher than with a conventional meter.	Medium	Different PPM technologies may have different risks of faults occurring, and different risks of a fault resulting in a disconnection. Some may provide a remote indication that the PPM is faulty.	▪ specify a timeframe for repairing faults ▪ telephone number for faults clearly displayed ▪ require a remote indication that the PPM is faulty
Operation of the system				
Onus on the consumer	Much greater consumer effort is required to operate a PPM compared to conventional metering arrangements.	Medium	PPM technologies range in ease of operation for the consumer.	▪ requirements to make the PPM system easier to understand and operate
Access to points of sale for credit	Vending outlets may not be conveniently located or the hours of operation may be inconvenient	High	Some PPM technologies allow vending to occur over the phone or internet.	▪ information about vending outlets to be provided before PPM installation ▪ specify the business hours of vending outlets ▪ specify the maximum distance to a vending outlet
Location of the PPM	PPMs may be inconveniently located for access to recharge meter, read display unit etc.	High	Some PPMs can be installed as a split meter so the meter display can be located separately from the meter in a more convenient location.	▪ minimum requirements specified on PPM location, with respect to the height, location (outdoors or indoors) and lighting of the PPM's display unit ▪ could be addressed in a PPM Code of Practice ▪ information to the consumer on location and any likely issues

Issue	Brief description	Significance	Technical considerations	Regulatory options
Physical operation of the system	Some consumers may have practical problems physically operating the PPM.	Medium	Some PPM technology is easier to use than others.	▪ a requirement that PPMs be adapted for use by a range of people ▪ specification of display type, size ▪ could be addressed in a PPM Code of Practice
Understanding how to operate the system	Some consumers may not understand how to operate the PPM.	Low	Some PPM technology is easier to use than others.	▪ requirements on the information to be provided on how to operate the system ▪ could be addressed in a PPM Code of Practice
Consumer choice / coercion				
Coercion to install a PPM because of past bad debt	Retailers may coerce consumers to take up PPMs where there is a history of bad debt.	High	Most PPMs allow the recovery of debt.	▪ not allow consumers in debt to move to a PPM ▪ ensure that all consumers can make an informed choice
Pre-existing meters	When a tenant moves into a property where a PPM is installed, there may be an incentive to keep the PPM.	Medium	Not applicable.	▪ a requirement for parity between entry costs for conventional meters and PPMs

Issue	Brief description	Significance	Technical considerations	Regulatory options
Coercion by village/park operators	Village/park operators may install PPMs so that tenants have no choice about their metering arrangement.	Medium	Not applicable.	▪ not allow on-sellers of electricity to install PPMs ▪ not allow on-sellers of electricity to install PPMs without the explicit informed consent of tenants ▪ legislation to facilitate enforcement of regulatory framework in caravan parks
Barriers to switching technology	Consumers may be locked into PPMs because it is too expensive to switch meters or because they are repaying debt through the meter.	Medium	Most PPMs allow recovery of debt.	▪ not allow debt to be recovered through a PPM ▪ specify alternatives to repayment through PPM ▪ regulate exit fees for PPMs
Barriers to switching retailer	Consumers in debt may be blocked from switching retailer or consumers may be locked into a retailer's PPM system.	Medium	Some meter types can share the same vending system, while other PPM systems are proprietary.	▪ the distributor installs and operates a state-wide PPM system which all retailers use ▪ common vending system that may be accessed by all retailers ▪ continue to prevent retailers blocking customer transfers on the basis of debt

Issue	Brief description	Significance	Technical considerations	Regulatory options
Major consumer protections				
Hiding fuel related poverty	Consumers who are disconnected may be undetected, and therefore not offered assistance. PPMs can hide disconnection across the system and therefore hide the extent of fuel related poverty under PPMs.	High	The smart card PPM can provide the retailer with historical information about the operating status of the meter.	▪ requiring that disconnection data must be collected by the retailer and provided to government agencies where requested ▪ consumers be surveyed about hardship in relation to PPMs ▪ requiring retailers to provide information to consumers about options where there is fuel related poverty
No safety net built into PPM system	After emergency credit is used up, there are no safety nets built into the system.	High	Some PPMs offer load limiting capability.	▪ requiring that PPM disconnection data must be collected by the retailer and the same assistance offered as to other consumers ▪ could be addressed in a PPM Code of Practice ▪ requiring a load limiting facility ▪ ensuring consumers have access to the Emergency Energy Payment Scheme ▪ requiring a certain amount of free daily electricity to be provided to vulnerable consumers

2 Introduction

This report considers a range of consumer issues in relation to pre-payment meters (PPMs) used for electricity supply. The term PPM can encompass a range of technologies, but common to all is a metering system that supplies electricity on pre-purchase of credit.

PPMs have been well established in the UK for many years and are being adopted in a growing number of countries. These include countries in Africa and South America, as well as Ireland, New Zealand, New Guinea and Fiji. There has been an increasing interest in Australia in PPMs, particularly in Tasmania where approximately 14 per cent of consumers now have this form of meter.

PPMs have the potential to offer a number of benefits to consumers. However, PPMs also present a number of concerns for consumers, particularly more vulnerable consumers.

The Essential Services Commission of South Australia (ESCOSA), on behalf of its Consumer Advisory Committee, has engaged KPMG to report on consumer issues related to PPMs.

2.1 Objectives

The key objectives of this study are to identify:

- the issues for consumers in relation to PPMs;
- the core capabilities of PPM technology and how they can address the consumer issues identified;
- whether PPMs can meet the needs of some South Australian consumers; and
- appropriate consumer protection mechanisms to accompany PPMs in South Australia.

This study considers the impacts of PPMs on those consumers who are most likely to be affected by PPMs, because of their vulnerability. The term "vulnerable" in this sense is used to define those consumers who, due to their particular circumstances, do not have financial or other protections to insulate them against potential disadvantages that can exist in our social structure. They are therefore more at risk of negative outcomes and require particular consideration in development of policy and systems in order that they not be unfairly disadvantaged.

2.2 PPM system

For the purpose of this report, a PPM system is defined as consisting of:

- a meter located at the consumer's residence;
- a vending system that allows the consumer to purchase credit via points of sale; and

- a central computer system that provides for management, administration, financial and engineering control.

There are broadly three modern types of PPM technology for transferring credit:

- magnetic card – credit is transferred to the meter using a paper card with a magnetic strip, which is purchased at vending points (refer Figure 1);
- keypad – credit is transferred to the meter via a coded number, obtained via the phone, internet or a vending point. The coded number is generated when payment is made and is later entered by the consumer on to a keypad on the meter (refer Figure 2); and
- smart card – credit is transferred via a plastic card with an embedded microprocessor. Payment is made into the card at vending points (refer Figure 3).

Appendix A provides a more detailed discussion of these PPM technologies.

Appendix B explains why retailers may have an incentive to offer PPMs.

Figure 1: Magnetic card PPM

Figure 2: Keypad PPM

Figure 3: Smart card PPM

2.3 International experience with PPMs

Appendix C provides a detailed discussion of experiences with PPMs in other jurisdictions. Table 1 summarises key aspects of PPM usage in selected jurisdictions.

Key observations from other jurisdictions are:

- internationally, the most common reason for introducing PPMs has been to overcome payment difficulties. Generally, there does not appear to be concern on the part of regulators that PPMs are used for debt recovery;
- the take up rate has increased with improved technology and, in some jurisdictions, by coercing those with bad debt histories to have a PPM installed. (Both these factors are at work in the UK along with the incentive to adopt a PPM arrangement where a meter already exists in a newly tenanted property);
- there has been strong consumer demand for PPMs in Tasmania. Whilst the UK appears to have reached a PPM consumer saturation level of 16 per cent of all consumers, the saturation level in Tasmania appears to be higher. However PPMs have been offered in conjunction with time-of-use tariffs in Tasmania. Therefore, it is difficult to separate whether consumers are attracted by the pre-payment feature or by the time-of-use feature of the PPM offering;
- having PPMs in a contestable electricity market (e.g. the UK and New Zealand) raises a number of issues that do not arise in a non-contestable market (e.g. Tasmania, Northern Ireland and South Africa). Issues for contestability include:
  - the potential for PPM systems to lock consumers into a particular retailer either due to technology or due to debt recovery;
  - the complexity involved with a customer switching retailer, where the consumer is repaying debt and they are permitted to transfer retailer;
  - switching timeframes; and
  - obtaining meter readings required for wholesale market settlement;
- New Zealand experience suggests that consumers may not be interested in PPMs where there are no attractions such as favourable tariff structures and where there is minimal marketing;
- in Ireland there is no additional charge on consumers for having a PPM. The costs of PPMs are subsidised by other consumers through distribution charges. However as there are only 24,000 PPM consumers (or 1.8 per cent of all consumers) the cross subsidisation is currently small;
- Northern Ireland illustrates that PPM systems can be implemented in such a way as to offer lower PPM tariffs compared with the standard credit tariff; and
- South Africa illustrates that standardisation of the PPM vending system can facilitate competition in the provision of PPMs, thus reducing costs and potentially creating an incentive to take up this option if these savings are passed on to consumers.

Table 1: Summary of PPM usage in selected countries

	UK	Northern Ireland	South Africa	New Zealand	Tasmania
Number of PPMs	3,700,000	100,000	4,000,000	35,000 – 50,000	26,000
PPM consumers as a % of total consumers	16%	15%	55%	3%	14%
Full retail contestability	Yes	No	No	Yes	No
Tariff structure	Single rate	Single rate	Single rate	Single rate	Time-of-use
Technology	Mix	Keypad	Magnetic / keypad	Mix	Smart card
Primary reason for installation	Poor credit	Poor credit	Electrification	Poor credit and consumer choice	Consumer choice
Primary period of installation	1992 – 1998	2000 – present	1992 - 1999	Pre 2000	2000 – present
Emergency credit	£5 generally	£1	0	0	$5
Limits on timing of disconnection	Retailer decides	Yes	No	No	Yes
Use of meter for debt recovery	Yes	Yes	NA	No	Only piloted
Manual meter reads	Yes – at least annually	Yes – every two years	No	?	No

2.4 Benefits of PPMs

Retailers and manufacturers of PPMs often cite a range of benefits of PPMs for consumers. In some instances these benefits are not unique to PPMs because they can be offered through alternative arrangements. The potential benefits of PPMs for consumers include:

- increased ability to monitor and adjust electricity payments;
- avoidance of large bills;
- payment better aligned with electricity consumed;
- avoidance of disconnection/reconnection fees;
- no need to accommodate meter readers;
- ability to repay debt without being disconnected; and
- ability to offer time-of-use tariffs.

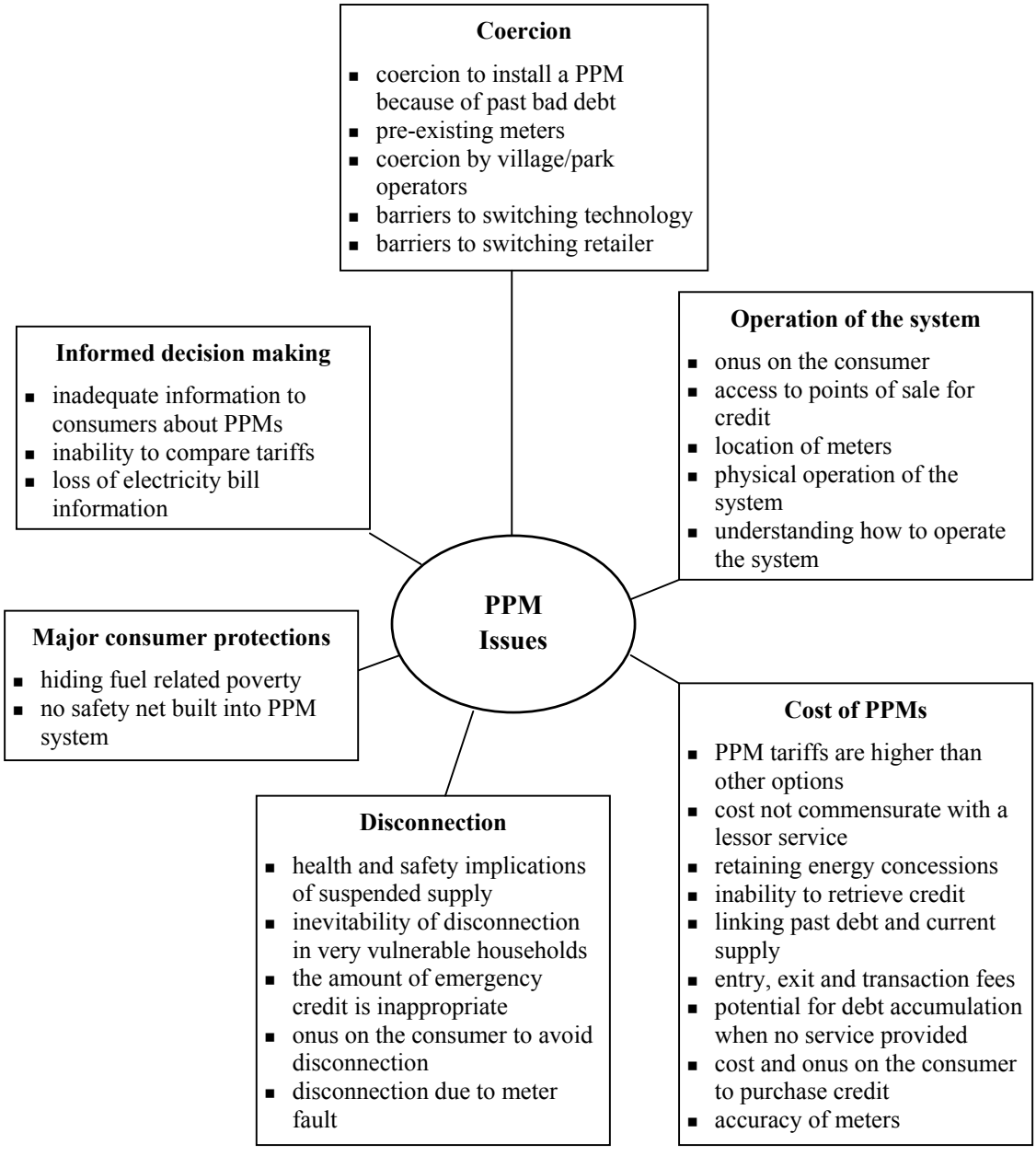
2.5 Key issues with PPMs identified in other jurisdictions

From a review of the literature, we have identified issues that consumers have experienced with PPMs in other jurisdictions. These issues can be grouped into six broad categories:

- informed decision making;
- cost of PPMs;
- disconnection;
- operation of the system;
- coercion; and
- over-arching consumer protection issues.

Figure 4 identifies these six broad issue category groupings and each of the specific issues that fall within these category groupings.

Figure 4: Key issues with PPMs identified in other jurisdictions



2.6 Structure of this report

Section 3 of this report summarises the features of the South Australian electricity market context which are relevant to this study.

Section 4 of this report discusses the potential benefits of PPMs which are identified in section 2.4.

Section 5 of this report provides an analysis of the consumers who are most likely to be adversely affected by PPMs and presents aspects of their situations which need to be borne in mind when considering the overall outcomes of introducing this kind of metering.

The six broad categories of consumer issues associated with PPMs that are identified in section 2.5 are discussed in sections 6 to 11. In each section, the issues are discussed by considering:

- potential issues with PPMs if they were to be installed in South Australia;
- particular issues for specific consumer groups;
- experiences with that issue in other jurisdictions;
- how the PPM technology can address that issue, or how it impacts on that issue;
- the regulatory options for addressing that issue; and
- any relevant indicators that might be monitored by ESCOSA.

2.7 Disclaimer

Please note that, in accordance with KPMG policy, we are obliged to advise that neither the Firm nor any member nor employee undertakes responsibility in any way whatsoever to any person or organisation (other than the Essential Services Commission of South Australia) in respect of information set out in this memorandum, including any errors or omissions therein, arising through negligence or otherwise however caused.

3 South Australian context

To provide a context for discussing consumer issues with PPMs, this section discusses the following for South Australia:

- the key features of the electricity retail market;
- consumer protection mechanisms currently in place;
- energy concessions which are made available by the South Australian Government;
- the availability to Centrelink beneficiaries of the Centrepay system; and
- the trial of PPMs by AGL in 2002.

3.1 Key features of the electricity retail market

3.1.1 Full retail competition

Full retail competition ("FRC") was introduced into the South Australian electricity market from 1 January 2003. This means that all electricity consumers are able to switch retailer, or move onto a market contract with AGL, the current incumbent retailer. Generally consumers moving to a market contract will pay a little less for their electricity.

Nevertheless, switching rates have been relatively low (less than 2 per cent of consumers had moved to market contracts in the first year of FRC). Therefore, the government has offered a $50 Electricity Transfer Rebate to people eligible for the South Australian Energy Concession if they switch to a market contract.

The existence of full retail contestability in South Australia means that it might be important that PPMs do not create barriers to consumers switching retailer.

In South Australia, consumers in debt are allowed to transfer retailer, although a new retailer may require a consumer to repay an outstanding debt that relates to a previous supply address prior to transfer[1]. This means that if PPMs were introduced, and debt recovery through PPMs were allowed, a mechanism may be required to ensure that the original retailer receives payment for outstanding debt.

3.1.2 Domestic electricity retail prices

Domestic electricity retail prices in South Australia are amongst the highest in Australia, and this has received considerable recent media attention.

[1] Energy Retail Code, clauses 4.1.1(i) and (j)

High prices have been partly caused by the consumption patterns of domestic consumers, driven by climatic factors, that is, high consumption on hot summer days. High prices combined with climatic drivers of electricity consumption mean that fuel related poverty issues are significant in South Australia.

Research into the proportion of income that households spend on fuel has shown that, in 1993, 43 per cent of Australians as a whole spent three per cent or more of their income on fuel whereas for South Australians the figure was 46 per cent[2]. The contrast between Australia and South Australia is even more marked for low income groups. The proportions for those on the 10 to 40 income percentile with this level of fuel expenditure are 67 per cent and 72 per cent respectively.

Comparing 1993 and 1998 household expenditure patterns has also shown an increase over time in the proportion of income that South Australian households were spending on fuel. By 1998 the proportion of South Australians spending three per cent or more of their income on fuel had risen to 52 per cent[3].

Currently consumers are charged a single usage charge, except those with a controlled off-peak hot water load who have two single usage charges – one for the controlled off peak hot water load and a peak rate for all other loads.

In discussion to follow, it is noted that PPMs may be used to offer more flexible time-of-use tariff structures.

3.2 Consumer protection

The following consumer protection mechanisms in South Australia are discussed in this section:

- current billing and information requirements;
- payment plans;
- disconnection limitations;
- dispute resolution;
- marketing conduct; and
- hardship policies.

[2] Richardson, S., and Travers, P., *Fuel Poverty: A Concept with Power in South Australia*, National Institute of Labour Studies, Flinders University, Adelaide, 2002, p. 31.

[3] Richardson, S., and Travers, P., *Fuel Poverty: A Concept with Power in South Australia*, National Institute of Labour Studies, Flinders University, Adelaide, 2002, p. 31

3.2.1 Current billing and information requirements

Domestic consumers are generally billed on a quarterly basis. The Energy Retail Code[4] requires that a domestic energy bill display a range of information, including:

- customer details;
- fees, charges and tariffs;
- consumption information;
- a list of payment methods;
- telephone numbers for faults, emergencies, billing and payment enquiries and instalment payment options; and
- a comparison of the consumer's current and previous year's average daily usage.

With PPMs, some of this information will not be required, but there is also a risk that consumers will not have access to information that may be useful to them. Therefore, there may be a need to consider the billing and information requirements for consumers with PPMs.

3.2.2 Payment plans

Where a residential consumer informs the retailer that they are experiencing payment difficulties, or when the retailer's credit management processes indicate that a residential consumer is experiencing payment difficulties, the retailer must currently offer the residential consumer an instalment plan and, where appropriate, provide free of charge information on[5]:

- the right to have a bill redirected to a third person, as long as that third person consents in writing to that redirection;
- state government assistance programs; and
- independent financial and other relevant counselling services.

A retailer must offer residential consumers at least the following payment options[6]:

- an arrangement under which a residential consumer may make payments in advance towards future bills; and
- an interest and fee free instalment plan under which the residential consumer is given more time to pay a bill or to pay arrears.

[4] Clause 6.3.4

[5] Energy Retail Code, clause 7.6

[6] Energy Retail Code, clause 7.7.1

The Energy Retail Code[7] requires that a retailer offering an instalment plan must:

- take account of a consumer's usage needs and capacity to pay;
- specify the period of the plan, the number of instalments, the amount of the instalments and how the amount of the instalments is calculated;
- monitor the residential consumer's compliance with that plan; and
- have in place fair and reasonable procedures to address payment difficulties a residential consumer may face while on the plan.

In 2002/03, 190,700 South Australian domestic consumers (about one quarter of the total number of domestic consumers) were on instalment plans. This indicates that a very significant proportion of consumers experience payment difficulties and therefore the impacts of PPMs on this group require careful consideration.

3.2.3 Disconnection limitations

Where, because of a lack of sufficient income the consumer is unable to pay a bill, the retailer must not request the disconnection of the consumer's supply unless the retailer has[8]:

- used its best endeavours to contact the consumer personally;
- given the consumer information on government funded concessions, if applicable, and referred the consumer to the organisation responsible for that concession;
- offered the consumer alternative payment plans;
- given the consumer a reminder notice;
- after the expiry of the period referred to in the reminder notice, given the consumer a written disconnection warning with five business days' notice of its intention to arrange for the disconnection (the five business days shall be counted from the date of receipt of the disconnection warning); and
- advised the consumer of the existence and operation of the Industry Ombudsman scheme.

A retailer must not arrange for the disconnection of a consumer's supply[9]:

- for non-payment of a bill where the amount outstanding is less than an amount approved by the Regulator and the consumer has agreed with the retailer to repay that amount;
- where a person ordinarily residing at the supply address is dependent on designated life support equipment;

[7] Clause 7.7.4

[8] Energy Retail Code, clause 9.2.2

[9] Energy Retail Code, clause 9.7

- where a consumer has made a complaint, directly related to the reason for the proposed disconnection, to the Industry Ombudsman or another external dispute resolution body and the complaint remains unresolved;
- where the consumer has formally applied for assistance for a concession or rebate and a decision on the application has not been made;
- where the consumer has failed to pay an amount on a bill which does not relate to the sale and supply of electricity;
- after 3 pm on a business day; or
- on a Friday, on a weekend, on a public holiday or on the day before a public holiday, except in the case of a planned interruption.

Despite the large numbers of consumers in financial difficulty, in 2001/02, there were only 7,470 South Australian domestic disconnections due to failure to pay the amount due. Of these, 4,189 were reconnected within seven days. This suggests that disconnection protections may be an important component of consumer protection. PPMs can potentially circumvent these protections. Therefore, consideration of the issue of disconnection with PPMs is likely to be important.

3.2.4 Dispute resolution

An electricity retailer must prepare and submit to ESCOSA, for approval, its procedures to resolve consumer complaints and disputes[10].

For a consumer with a complaint, the first step to resolution is to raise the issue with the electricity retailer by telephoning the enquiries number shown on the electricity bill. Under a PPM system where bills are no longer provided, a consumer might not have access to the inquiries number.

The complaint can be escalated within the retail business, and ultimately be referred to the Energy Industry Ombudsman. The Ombudsman has the power to investigate and resolve disputes between consumers and the electricity businesses. The Ombudsman also has the power to make binding, final decisions, which may include the award of compensation of up to $20,000, and if the parties agree, up to $50,000. The services provided by the Ombudsman are free to consumers.

Currently consumers cannot be disconnected if they have a complaint lodged with the Ombudsman. However, consumers under any future PPM system installed may lose this protection.

[10] Energy Retail Code, clause 3.2.1

3.2.5 Marketing conduct

Energy retailers are required to comply with the Energy Marketing Code. The Code sets out minimum requirements in relation to the marketing behaviour of retailers, including:

- information to the provided by the retailer;
- dispute resolution; and
- obtaining consumer consent.

Some of the regulatory options regarding PPMs might be implemented through the Energy Marketing Code.

3.2.6 Hardship policies

Some retailers supplying domestic consumers, such as AGL and Origin, have developed their own hardship policies. The implementation of these hardship policies relies on the retailer being able to readily identify consumers in hardship. PPMs may not allow retailers to readily identify consumers in hardship.

3.3 Energy concessions

The SA Energy Concession is a concession funded by the South Australian Government to reduce the cost of energy to eligible pensioners and beneficiaries. From 1 January 2004 the SA Government increased the SA Energy Concession from $70 per year to $120 per year. Eligible pensioner consumers are those with:

- a Health Care Card and a dependent living with them;
- a Commonwealth Seniors Health Care Card (Centrelink or Department of Veterans' Affairs);
- a Pensioner Concession Card (Centrelink or Department of Veterans' Affairs);
- a SA State Concession Card (Family and Youth Services);
- a Gold Repatriation Health Card (Department of Veterans' Affairs) where the card states that the holder is considered to be either TPI (Totally and Permanently Incapacitated), EDA (Extreme Disability Adjustment) or a War Widow; or
- a Foreign War Widow.

This concession can be credited to the electricity account by the retailer and is calculated on a daily basis for the number of days within an electricity account.

Beneficiary consumers can also receive a concession, but they need to apply to Family and Youth Services (FAYS) for the concession each time an electricity bill is received while they

are eligible. Eligible beneficiary consumers must be in receipt of one of the following benefits:

- Newstart Allowance;
- Youth Allowance;
- Widow Allowance
- Sickness Allowance;
- Partner Allowance;
- Special Benefit;
- Parenting Payment Partnered;
- New Enterprise Incentive Scheme; or
- Commonwealth Development Employment Program.

The Emergency Energy Payment Scheme provides a once in a lifetime single payment of $200 to assist with an electricity bill in exceptional circumstances involving a severe household financial crisis such as bereavement, sudden loss of employment or the breakdown of a major electrical appliance. However access to this scheme is extremely limited.

Additionally, the Government provides a domiciliary oxygen concession for up to 50 per cent of the electricity used by eligible equipment.

In 2002, over 25 per cent of South Australian households received an electricity concession.[11] Therefore, because a large proportion of energy consumers are dependent on energy concessions, it is very important that access to concessions would not diminish with PPMs installed.

3.4 Centrepay

Centrepay is a voluntary direct deduction service available if a consumer receives an eligible payment from Centrelink. The eligible consumer can nominate the amount they want deducted from their Centrelink payment to be transferred by Centrelink to a registered company towards services received. At the end of the billing quarter reconciliation will result in a bill for any amount outstanding. Services may include private rent, electricity, gas, water and telephone. Centrepay has the advantage of ensuring that eligible consumers can pay a fixed fortnightly amount for their electricity, thus greatly reducing the size of their quarterly bill. As South Australian electricity retailers are not required to offer the

[11] John Lawrence, *Electricity, It's Just Essential: Low Income Electricity Consumers Project Report*, Project of the SA Council of Social Service and Council of the Ageing (SA), August 2002.

Centrepay service, this limits its availability and there will currently be a number of consumers eligible but unable to access the arrangement.

In South Australia, 7,283 electricity consumers were using Centrepay as at the end of February 2004[12].

Centrepay therefore offers an alternative payment mechanism to PPMs for consumers receiving payments from Centrelink.

3.5 AGL's trial of PPMs

In April 2002, AGL commenced a trial of PPMs with 100 households in Marion, an inner suburb of Adelaide. Offers were sent to 4,650 households in Marion to participate in the trial for three months. AGL reports that Marion was selected because its demographics were similar to the average for South Australia. 290 responses (6.2 per cent response rate) were received, and the first 100 responses received were selected for the trial.

The trial was intended to run until the end of June 2002, but it was extended to the end of November 2002.

Trial participants were provided with a smart card PPM free of charge, and with a demonstration of the meter's operation when the PPM was installed. Smart cards could be recharged at the local AGL Energy Shop and at a local BP service station. Emergency credit of $8 was provided. Power could not be disconnected between 8pm and 8am.

The PPMs were offered with a time-of-use tariff with a peak (6am to 9pm) rate of 14.66 c/kWh, an off peak (9pm to 6 am) rate of 5.53 c/kWh and a supply charge of 29.22 c/day, all inclusive of GST. The peak rate is the same rate as the standard domestic light/power rate (all times), the off-peak rate is the same as the off-peak controlled load rate and the supply charge is the same as that which would be charged to a consumer with an off-peak controlled hot water load. Whilst the off-peak rate normally only applies to the hot water load, the off-peak rate with the PPM applied to all off-peak consumption. Therefore, any consumer moving to the prepayment tariff would pay less for their electricity if their consumption pattern remained the same.

Surveys of the consumers participating in the trial were conducted in May 2002 and December 2002 on behalf of AGL. Key reported findings of the December 2002 survey were:

- 54 per cent of the sample were retirees or pensioners. This is significantly higher than the South Australian average, suggesting that retirees and pensioners might be more predisposed to PPMs;

[12] Centrelink, Personal Communication, 2 April 2004.

- the median annual household income was in the range of $20,000 to $40,000. This is lower than the South Australian average, suggesting that lower income households might be more predisposed to PPMs. There is also likely to be overlap between the retirees/pensioners and low income consumers;
- there is a clear trend in the sample that the higher the annual income, the less frequently the PPM is monitored by the consumer. This suggests that lower income households might benefit more from the monitoring capability of a PPM;
- 82 per cent of consumers were extremely satisfied with the meter;
- the three primary benefits of the prepayment package were seen as:
  - having more control over spending and usage;
  - the system was easy to use / convenient; and
  - consumers were more aware of usage / more efficient ways of using electricity;
- however, despite this, 51 per cent said they did not change the times when they used their appliances since moving to the PPM;
- the biggest disadvantage of the PPM was having to remember to monitor how much credit was left;
- in relation to the frequency of payment:
  - 72 per cent purchased credit monthly or less often;
  - 29 per cent said that one reason they were satisfied with the PPM was because it offered flexibility to pay as you go or it was easier to budget; and
  - 15 per cent said that they would prefer to have a standard electricity meter but pay for electricity in fortnightly or monthly instalments instead of the PPM;
- 27 per cent said they activated the emergency credit facility and 96 per cent of those said that the emergency credit was sufficient to tide them over until they could get to a credit vending point; and
- most thought their electricity costs had decreased slightly. This is consistent with the discount embedded in the prepayment tariff.

As the PPM was offered free of charge, and electricity was cheaper than under the standard tariff, it is reasonable to assume that interest in and satisfaction with the PPMs might be higher than what might reasonably be expected if PPMs were offered on a commercial basis. In addition, individual instruction offered to new consumers on installation of the meter is also not typical of PPM introduction in other jurisdictions and makes the trial results likely to be less representative of other PPM situations.

4 Potential benefits of PPMs

This section examines the potential benefits of PPMs for all consumers. These factors, whilst they benefit consumers, may not be unique to PPMs and may currently be offered through alternative arrangements.

4.1 Increased ability to monitor and adjust electricity expenditure

PPMs can provide consumers with the ability to monitor electricity expenditure where the PPM provides real time information on usage rates and costs, and where the meter display is conveniently located. The consumption information provided by PPMs can be superior to that provided in conventional domestic meters. Consumers can therefore become more aware of which appliances consume more electricity. They may also become more aware of how they can conserve electricity, such as switching off lights in unoccupied rooms or paying greater attention to when and how they operate air-conditioners. Consumers may then be in a better position to make decisions about controlling or reducing their electricity expenditure, where this is feasible.

However this benefit could be obtained by installing an electronic meter with a separate display unit inside the house.

4.2 Avoidance of large bills

Most residential consumers are billed on a quarterly basis. This can create cash flow problems for households on a tight budget. Furthermore, households face uncertainty over the amount of the bill. By contrast, PPMs allow consumers to pay for electricity in smaller increments at a frequency determined by the consumer.

Consumers might also have other options to pay in smaller increments:

- some retailers may offer monthly billing, to help reduce the size of individual bills;
- the Centrepay system, although only available to Centrelink beneficiaries and not offered by all retailers, allows fortnightly payment on a direct debit basis; and
- payment plans offer consumers the opportunity to pay for electricity in amounts to suit their particular situation.

Table 2 compares PPMs with alternative billing options. PPMs provide more flexibility than the alternative billing options. PPMs allow consumers to pay only in amounts they choose for the short term, possibly to purchase electricity credit in smaller amounts than the amount paid in automatic deductions and to pay less in a given period by deliberately rationing use.

Table 2: Comparison of payment options

	Payment	Credit	Payment frequency
Payment options for all consumers			
PPM	In advance	Limited credit in the form of emergency allowance (typically a few days supply)	Flexible
Monthly billing	Retrospective	Credit for up to one month supply plus the period until payment must be made.	Monthly
Quarterly billing	Retrospective	Credit for up to three months supply plus the period until payment must be made.	Quarterly
Payment options for vulnerable consumers			
Payment plan	Flexible – either in advance or retrospective	More than three months credit may be provided	Flexible
Centrepay*	Retrospective	Two weeks for Centrepay payments and three months for the remaining balance	Fortnightly, with monthly/quarterly reconciliation

* Only available to Centrelink beneficiaries and not offered by all retailers

4.3 Payment better aligned with electricity consumed

PPMs do not require meter readings for the purposes of billing. PPMs can avoid incorrect billing due to:

- poor estimates[13];
- incorrect meter reads; and

[13] Where a non-PPM cannot be read on a scheduled date (e.g. due to a locked gate or a vicious dog), consumption needs to be estimated. Sometimes consumers feel that an estimate has not been reflective of their actual consumption.

- administrative error.

PPMs avoid any frustration or conflict that may arise over estimated meter reads. In addition they mean that payment is more aligned with actual consumption (although in any given period there will also be a payment in advance component).

4.4 Avoidance of disconnection/reconnection fees

With conventional meters, consumers who cannot afford to pay their electricity bills may be:

- charged a financial penalty for late payment;
- disconnected and charged a disconnection fee; and / or
- required to pay a reconnection fee before they can resume using electricity.

These charges would further exacerbate financial vulnerability. PPMs allow consumers to avoid these charges.

However retailers could introduce other programs to minimise disconnections. ActewAGL in the ACT, for example, has introduced a "Stay Connected" program. It has worked proactively with vulnerable consumers to assist them to repay debt and stay connected thus avoiding costs of disconnection. It is our understanding that in South Australia, AGL, Origin and TXU are also instigating initiatives to minimise disconnections.

4.5 No need to accommodate meter readers

Some PPMs would not require meter readings for the purposes of wholesale market settlement, while others would.

Some consumers, such as security conscious consumers, may value not being inconvenienced or disturbed by meter readers. This applies to meters positioned outside the house, where the meter reader needs to enter the property, as well as for the minority of meters that are located indoors.

Avoiding the need to accommodate meter readings may be an advantage for some older consumers who are security conscious, for those with special health needs where mobility may be a problem as well as for those consumers in general who value their privacy.

As an alternative to a PPM, it is possible to replace a consumer's existing meter with a remotely read meter. However, this type of installation is likely to be more expensive than a PPM.

4.6 Repayment of debt

It is noted that debt repayment is not a feature of PPMs as such, although in a number of settings it has been combined with PPMs. Where this is the case, PPMs may allow consumers to repay debt over an extended time and still remain connected. PPM debt repayment can usually be achieved through one of the following options:

- based on usage (e.g. 1.5 c paid towards debt for every kWh consumed); or
- based on a daily fixed charge; or
- based on a proportion of the money paid at a point of sale.

Whilst being able to repay debt without being disconnected can be an advantage, it can also be an issue. A consumer may get locked into a debt repayment plan, the impacts of which might be financial hardship and reduced flexibility to juggle debts to meet the most pressing costs of everyday living. This is discussed further in section 7.5.

4.7 Ability to offer time-of-use tariffs

PPMs are offered in conjunction with time-of-use tariffs in Tasmania. A time-of-use tariff was also an important part of AGL's trial of PPMs in South Australia. Time-of-use tariffs offer consumers an opportunity to reduce their electricity costs by shifting consumption from times of high electricity cost (peak) to times of low electricity cost (off-peak).

However, time-of-use tariffs can also be offered with time-of-use meters or interval meters, which are less expensive than PPM meters. Therefore, the ability to offer these tariffs is not a unique benefit of PPMs *per se*.

5 Consumer groups most likely to be affected by PPMs

Before examining potential issues with PPMs, it is important to establish the particular consumer groups who are most likely to be affected. This section identifies and discusses those consumer groups, all of whom may be vulnerable to negative impacts of PPMs because of particular aspects of their situation.

Categories of vulnerable consumers are:

- those on low incomes (all family types[14]);
- older people;
- those with special health needs;
- those using social housing[15] or the pool of lower cost rental accommodation;
- those from culturally and linguistically diverse backgrounds; and
- those living in rural areas.

These categories are not mutually exclusive. Many older people on benefits or fixed incomes, for example, fall into the low-income category. However, it is their higher incidence of disability, mobility issues or limited experience with new technologies that shapes the consumer issues from their perspective.

Just as the issues may be specific to the consumer category, the ways to preserve advantages and address disadvantages may also vary according to the characteristics, needs and preferences of the group.

Key characteristics of the six categories relevant to this analysis are discussed in the following sections.

5.1 Those on low incomes

Competing financial pressures from costs for the essentials of housing, energy, food and other needs often require those on low incomes to "juggle" bills, defer payments and periodically get into bad debt situations[16]. The lowest income quintile may spend less in

[14] The Low Income Electricity Consumers Project undertaken by the SA Council of Social Service and the Council on the Aging in 2002 used the category of youth in its analysis. However this group has been included in the low income category for this report as it is their income and not their age which is the significant factor in relation to PPMs.

[15] Both public rental and community managed housing provided by the state.

[16] As Kliger points out, "People living long term on social security benefits, or in low paid work have difficulty surviving without getting into debt." Kliger B, *An Unfair Deal: A Consumer Audit of Electricity, Gas and Water Industry Reforms*, Melbourne, Stegley Foundation, 2000.

dollar terms on energy bills but still spends a greater proportion of total income than higher income quintiles[17] meaning that, for this group, utilities bills are especially subject to the inevitable debt management practice of deferring payment. Research conducted in 2001 into hardship in Australia found that twenty three per cent of those on the lowest income quintile reported not being able to pay their utilities bills on time and five per cent reported being unable to heat their home adequately[18].

Surveying in South Australia supports this finding, suggesting that low-income consumers have trouble paying their electricity bills.[19] This is borne out by data that indicates that a disproportionate number of low income people are disconnected or are on negotiated payment plans.

This group may also be forced into choosing short term "cost saving" options rather than choices which may give them better cost outcomes in the longer term. An example of this is the purchase of energy inefficient appliances that may require a lower initial outlay but have higher ongoing operating costs than alternative products. The Low Income Electricity Consumers Project undertaken in South Australia in 2002 associates the stresses of poverty with the possibility of "insufficient planning" and "poor decision making"[20]. However the reality may be simply that the habitual debt juggle forces a low-income household to choose a short term saving to make the immediate household budget balance.

There is an extensive body of work by social researchers on fuel related poverty, both here and overseas[21]. In addition, the recently released Senate Inquiry into Poverty and Financial Hardship has devoted a section to fuel poverty. The Inquiry noted that "electricity, gas, water and telephone services provide the basic means by which any household is able to function in a modern society"[22]. It also noted the case made by submissions that disconnection is particularly stressful for those with young children, the elderly, and infirm and those living alone. The Inquiry has recommended:

> *That public and private utilities have in place hardship provisions that provide for the reduction or waiver of debt to ensure that consumers genuinely unable to pay for the provision of utilities retain access to these essential services.*
>
> *(Recommendation 33)*

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[17] Professor Sue Richardson, *Household Energy Expenditure: Measures of Hardship & Changes in Income*, National Institute of Labour Studies, February 2004, page 10.

[18] Richardson, S., and Travers, P., *Fuel Poverty: A Concept with Power in South Australia*, National Institute of Labour Studies, Flinders University, Adelaide, 2002, p. 6.

[19] John Lawrence, *Electricity: Its Just Essential – Low Income Electricity Consumers Project,* August 2002.

[20] Ibid, p. 11.

[21] See for example, Richardson, S., and Travers, P., *Fuel Poverty: A Concept with Power in South Australia*, National Institute of Labour Studies, Flinders University, Adelaide, 2002 and Sharam, A., *Second Class Customers: Pre-Payment Meters, the Fuel Poor and Discrimination, Energy Action Group*, 2003..

[22] Parliament of Australia, *Senate Inquiry Into Poverty and Financial Hardship*, 2004, p. 191 - 193

5.2 Older people

The proportion of South Australia's population that is aged is increasing. Advances in medical technology are one of the main contributors to the aging population. This has meant that people are living longer but there are often significant health issues to be managed in the later years of life. At the same time, aged care policies and programs are increasingly concentrating on "ageing in place", or keeping older people in their own homes rather than aged care facilities. Programs such as the State/Commonwealth Home and Community Care (HACC) and Commonwealth Community Aged Care Packages (CACP) provide a range of care and supports which enable older people to live independently for longer than was previously possible. This has increased the number of older people living independently, many of whom may be frail or have complex health needs and many of whom live alone. Although there are obvious benefits to those who are assisted to remain at home, in terms of quality of life, this section of the community may require support and assistance in negotiating service systems beyond what they receive through formal programs such as HACC and CACPs.

Although older age is not inevitably associated with disability, there is a greater likelihood of disability (such as visual impairment and reduced mobility) especially with increasing age. There can also be issues in adjusting to new technology and keeping abreast of frequently changing service systems.

5.3 Those with special health needs

Those with special health needs may consume energy at high levels to control temperature or operate necessary equipment.

There may be an overlap in the categories of "older people" and "those with special health needs". However the two categories are treated separately as they do not always co-exist and because it is the specific characteristics and needs associated with one of these groups that are relevant in considering consumer issues in relation to PPM.

5.4 Those using social housing or the pool of lower cost rental accommodation

Social housing, especially older stock, and lower cost rental accommodation may be energy inefficient due to poor insulation and the nature of heating (and cooling) systems installed in the premises. In addition those using this housing pool, and particularly private rental accommodation, are more likely to move residences frequently than those on other housing tenures.

5.5 Those from culturally and linguistically diverse background

The levels of English proficiency for those from culturally and linguistically diverse backgrounds may mean that obtaining full information about consumer options, and the related implications and obligations, is inadequate. This may also apply to understanding existing service systems.

5.6 Those living in rural areas

An issue for those living in rural areas is access to services, specifically the distance and time to travel to service and commercial centres for those not living in regional centres. Access to services may not be as great an issue with electronic communication and internet connection. However, where a physical presentation is required, as in the case of installing or maintaining equipment, time factors and access barriers will still be significant.

5.7 Consumer groups and PPM issues

The above categories are not mutually exclusive and many consumers will be described by a number of the characteristics. The co-occurrence of low income and rural residence, for example, will amplify the impacts of travel costs to point of sale. Further, many older people will be on low incomes and may have special health needs. The low income characteristic is also likely to intersect with those using social housing or the pool of lower cost rental accommodation. As a general rule, the greater the number of the above factors that describe a consumer's situation, the greater their vulnerability to issues associated with PPMs.

Sections 6 to 11 that follow outline a range of potential issues with PPMs. Any particular issue will affect different consumer groups in different ways. Following discussion of each issue, the consumer groups most likely to be affected are identified.

6 Consumer ability to make informed decisions

Consumers making a decision about whether to commence, stay with, or exit from PPM arrangements require comprehensive information about this payment option. Furthermore, information that is available should be in a form that is easy to understand. This section outlines issues in relation to informed decision making. These are:

- inadequate information to the consumer about PPMs;
- inability to compare tariffs offered under PPMs and other options; and
- loss of electricity bill information.

6.1 Inadequate information to the consumer about PPMs

Consumers making informed decisions in relation to PPMs require information, in a form that is easy to understand, about the full costs to them of this option and related matters including:

- any entry costs;
- usage tariffs;
- fixed daily charges which may apply in addition to usage charges;
- access to display information in the meter;
- information on connection and disconnection;
- emergency credit arrangements;
- load limiting (if applicable);
- location and hours of operation of points of sale for credit purchase;
- any vendor's surcharge borne by the consumer as part of their purchase of credit;
- exit costs;
- information on how to change payment systems;
- lead times to arrange change to an alternative metering system;
- safety net arrangements in the event of using up emergency credit;
- complaints mechanisms;
- arrangements for maintenance of meters, including emergency maintenance;
- responsibility for damage to meters;
- arrangements for answering consumer queries about meter operation; and
- company hardship policies.

From a consumer perspective it is important that information be readily available during the time that a PPM is installed and not just when decisions are being made about installing a PPM.

Particular issues for specific consumer groups

Older people may have difficulty in making informed choices if information is not clear, simple and straightforward.

For those from **linguistically diverse backgrounds** who may not be proficient in English, special arrangements are likely to be required if they are not to be disadvantaged in the quality of the communication they receive about the PPM system and all costs.

Experiences in other jurisdictions

In Tasmania Aurora provides a brochure to new PPM consumers which provides the following information:

- an Aurora phone number to ring for information, including the nearest purchasing point and other help;
- pictures of the smart card and a wall mounted meter;
- details of the information contained on the meter display;
- details of the $5 emergency credit allocation and how to activate this;
- advice of the tariffs available (standard, off peak, Hydroheat);
- a warning to leave enough credit in the meter to cover costs accruing during absences; and
- what to do when moving out.

In the UK, each retailer is required to submit a Code of Practice to the regulator for approval. The Code of Practice must include information on the operation, advantages and disadvantages of PPMs, and the location and business hours of vendor outlets.

Technology

PPM technology cannot address this issue.

Regulatory options for providing information before a decision is made to take up PPMs

Regulatory options that may be considered to address the provision of information to consumers prior to making a decision to install a PPM may include:

- detailing in a code the minimum information that should be provided to a consumer before they can give their consent for a PPM to be installed. Information required as a minimum is set out above under the discussion of the issue. This would ensure that all retailers would adopt the same standard, hence making it easier to compare and understand information;
- a requirement for the retailer to develop a PPM Code of Practice that must be approved by ESCOSA. The PPM Code of Practice would be required to prescribe how the retailer would ensure that consumers could make an informed choice about PPMs; and
- ESCOSA could publish and distribute information to all electricity consumers, informing them of the advantages and disadvantages of PPMs. ESCOSA might need to address the PPM offering of more than one retailer, and might need to update this information if retailers adjust their tariffs. This option has the advantage of providing consumers with objective information, but has the disadvantage that consumers may not have access to this information when they are presented with a PPM option. It might also be an expensive option because ESCOSA would need to target all residential consumers.

Regulatory options for providing information to new PPM consumers

Regulatory options may include:

- in the case of new consumers, retailers could be required to provide, within a certain period, an information pack which should include the following information:
  - advice on tariff and billing options, information on all the tariffs available to that consumer, any entry and exit fees which apply and other relevant information; and
  - clear information on how to operate the PPM system; and
- requiring that PPMs have, clearly printed on them, a telephone number for consumers to contact requiring information.

Monitoring

General information provision might be monitored through:

- obtaining copies of information provided by retailers;
- retailers providing periodic statistics on the number of consumers choosing to switch to a PPM, and those subsequently choosing to move off a PPM;
- the number of complaints received by the Ombudsman; and / or
- a periodic consumer survey carried out by ESCOSA.

6.2 Inability to compare tariffs

Where the structure of tariffs is different, comparing the costs of electricity can be a complex task. Whilst the tariff structure for a conventional accumulation meter[23] is very simple, the tariff structure with a time-of-use meter[24] may be more complex, and the tariff structure with an interval meter[25] may be more complex again.

Whilst some PPMs record consumption in the same way as a time-of use meter, other PPMs record consumption in the same way as an interval meter. It is often the situation that the tariff with a PPM cannot easily be compared with the tariffs under other metering arrangements. Consumers may therefore make a decision to move to a PPM tariff based on a particular feature of prepayment that they find attractive, but not realising that they will pay significantly more for their electricity. Whilst the issue of comparability of tariffs applies irrespective of meter type, it is a particular issue for PPMs that might offer features which could lure consumers into accepting higher tariffs.

To calculate costs under different options, a household would have to be able to estimate their typical usage patterns in summer, winter and between seasons, and calculate these for the PPM option and other metering arrangements. The exercise is both highly involved and demanding, and will be made even more difficult if a household attempts to factor in the costs of purchasing credit (such as time and transport costs) under the PPM option.

In reality, few households would have the available consumption history data required, the ability to make informed assumptions about consumption, and the skills to undertake such calculations. What can happen by default is that the consumer focuses on one aspect of the total PPM package and makes their decision on the basis of that attribute without having full sense of the impact this will have on their situation. This attribute may, for example be the existence of a very low off peak tariff which holds the possibility of making savings on energy expenditure but where the actual impact may be minimal if the consumer cannot adjust their usage patterns to take advantage of cheaper rates. Similarly, the prospect of smaller bills may obscure the likelihood that total electricity expenditure will likely be higher.

Experiences in other jurisdictions

In most cases (Ireland and Northern Ireland being the exception[26]) costs of electricity to the consumer are greater under PPM. However awareness of the relative costs impacts of options may not necessarily change consumer choice: the findings of a survey by the UK

[23] A conventional accumulation meter only records the cumulative consumption at any point in time.

[24] A time-of-use meter records consumption in pre-set time "buckets".

[25] An interval meter records consumption for each half hourly interval.

[26] The SA trial is not included here.

Electricity Association in 2000[27] found that 85 per cent of consumers with a PPM chose the PPM as their preferred method of payment and most were aware that they were paying at a premium. There are two possible reasons for low-income consumers in this situation not moving off the PPM system. They may be gaining other benefits through PPMs, such as preventing large bills, which outweighed the disadvantage of higher tariffs. Alternatively there may be barriers to exit (such as exit costs), which prevent their switching.

It is also noted that the major reason (43 per cent) for obtaining a PPM which was selected in a UK survey was that 'it was there when I moved in'[28], suggesting a passive choice of PPMs.

In Ireland tariffs are comparable across PPM and other billing arrangements.

In both Tasmania and the South Australian trial, the consumption tariff and fixed costs vary significantly between PPM and other arrangements. As the Tasmanian PPM includes standard, off-peak and hydroheat options, comparisons between costs that would be incurred on this relative to other options are complex.

Particular issues for specific consumer groups

This issue affects all consumer groups as few can be assumed to have the skills and data available to make tariff comparisons.

Those on **low incomes,** to whom cost is a particularly important consideration, may not make fully informed choices where the PPM option is combined with a variable consumption tariff which offers attractive rates at certain hours of the day. The potential for cheap electricity, which may affect the choice of PPM, may not be delivered in reality because the household cannot re-organise its usage patterns sufficiently to take advantage of the tariff structure.

Language barriers may make comparisons more difficult for **those from culturally and linguistically diverse backgrounds.**

Technology

PPM technology contributes to this issue as it can allow different tariff structures, such as time-of-use. The technology cannot address this issue.

[27] Electricity Association, *Affording Gas and Electricity: Self Disconnection and Rationing by Prepayment and Low Income Credit Consumers and Company Attitudes to Social Action*, March 2001

[28] MORI, Electricity Competition Review: Research Study Conducted by OFFER, UK, June 1999.

Regulatory options

Regulatory options, which may be considered to address this issue, may include:

- requiring that the PPM tariff structure should be the same as at least one other non-PPM tariff. For instance, if a retailer wished to offer a PPM time-of-use tariff, they would first be required to offer a non-PPM time-of-use tariff. This option has the advantage of ensuring that consumers should readily identify the discount/premium they would be paying for moving to a PPM;
- requiring that retailers present to consumers a comparison of the full costs for a set of typical consumers on a PPM tariff and on a comparable credit tariff. This approach will not assist those consumers whose situation is not typical. The choice of the "typical" households is pivotal and may need to be determined by ESCOSA; and /or
- including PPM tariffs in ESCOSA's price comparison service.

Monitoring

If retailers were required to provide a comparison of costs under a PPM and credit tariff, this information could be monitored to check that the calculations are unbiased.

6.3 Loss of electricity bill information

The importance of billing information similar to that available to those consumers on other billing arrangements has been referred to above. As PPM consumers do not get a quarterly bill, they miss out on the detailed information provided which shows a comparison of the consumer's current and previous year's average daily usage. This information is detailed in section 3.2.1.

Consumers are able to collect this information themselves, but this means they, rather than the retailer, must take responsibility for this monitoring function.

Experiences in other jurisdictions

It is understood that UK PPM consumers get annual billing advice[29].

Technology

Technology can provide the consumer with information on consumers' historical electricity purchases and electricity usage. This can be achieved in two ways:

- the PPM can provide this information to the consumer through the meter display; or

[29] Personal communication with representative of Landis+Gyr, 16 March 2004

- the PPM system can provide this information to the retailer, and the retailer could feed this information back to the consumer.

Some PPM technologies can provide this information to the consumer through the meter display. Most modern PPM technologies can provide electricity purchase and electricity usage information to the retailer. To provide this information to consumers, retailers would need to ensure that their vending system was meter specific, that electricity purchase information was captured in a database, stored for a period of time, and provided to consumers.

Regulatory options

Regulatory options for the provision of information on historical consumption and costs may include:

- a requirement for the retailers to provide a statement of historical consumption and/or purchase information and comparative information on a periodic basis;
- a requirement for the retailer to provide PPM consumers with access to historical consumption and/or purchase information and comparative information; or
- a requirement for the retailer to provide a statement of historical consumption and/or purchase information and comparative information on request and at no charge.

The first option ensures that PPM consumers are on a par with those on other billing methods in respect of information received.

Information could be made available:

- from the meter;
- from the point of sale of credit; or
- by being mailed periodically.

Monitoring

This issue might be monitored through complaints received by the Ombudsman and through review of information being provided to consumers.

7 Cost of PPMs

Overall costs of essential items as well as cost movements are of particular significance to those on low and fixed incomes. As the Energy Action Group in Victoria has commented "the fundamental mismatch between income and expenditure means that even very small changes in circumstances or charges can precipitate a minor crisis capable of cascading into major crisis.[30]"

This section considers the following consumer concerns in relation to costs of PPM:

- PPM tariffs may be higher than other options;
- costs paid by the consumer are not commensurate with the lesser service they receive;
- the need for eligible consumers to retain their energy concessions;
- inability to retrieve credit; and
- the linking of past debt and current consumption

7.1 PPM tariffs may be higher than other options

There are a number of factors impacting on the costs of providing PPMs. The actual meters used are more expensive than conventional meters, and there is a significant cost in establishing the point of sale infrastructure and back office systems. These costs may be offset by reductions in the retailer's operational costs by:

- removing the need for meter readings, issuing bills and manual disconnections/reconnections;
- reducing the level of bad debt[31], the costs associated with debt management; and
- improving cash flow.

Even where a time-of-use tariff is offered with the PPM, then depending on the different rates that apply at different times of the day, and the consumer's pattern of usage, the cost of electricity may still be higher under a PPM than under a conventional meter, assuming that the cost of the PPM is not subsidised by other consumers.

Experiences in other jurisdictions

In many overseas jurisdictions the tariff with a PPM is higher than a conventional meter. Northern Ireland is a notable exception because a 2.5 per cent discount is offered to those

[30] Submission by the Energy Action Group Victoria to Ministry of Energy and Utilities, NSW, *Proposed Market Operation Rule on Prepayment Metering, February 2003.*

[31] For a retailer with a net retail margin of 5 per cent, non-payment of a bill by one customer would remove the retailer's margin on 20 other customer bills.

with a PPM. In Tasmania the fixed costs are higher for consumers with a PPM, although it is difficult to calculate whether the variable usage tariff compensates for this.

The experience of PPMs shows that that they are likely to be taken up by low-income households therefore the cost impact on consumers is critical.

Particular issues for specific consumer groups

If higher costs for electricity are incurred with a PPM installed then this increases the impact of electricity purchase on the budget of any consuming household. Those on **low incomes** will feel this impact more keenly. This may exacerbate the practice of "debt juggling" and of going into bad debt as a way of managing.

Technology

The net impact of introducing a PPM system depends in part on the PPM technology selected. As a rule, increased functionality in a PPM will greatly benefit the consumer but also comes at higher cost. The smart card technology, for example, has a relatively greater cost compared to the other technologies, but the meter does not need to be read manually. In contrast, keypad technology has lower costs compared to the smart card technology but the meter needs to be read manually on a periodic basis.

Although technology may have a role in reducing costs, there needs to be a commitment by the retailer to pass any reductions on to the consumer if the consumer is to realise any real benefit.

In the longer term, the costs associated with installing PPMs may be impacted by requirements for wholesale market settlement and Energy Market Reform initiatives. The Ministerial Council on Energy has recommended that the 'costs and benefits of interval meters' be considered[32]. If this assessment indicates that the benefits of interval meters exceeds the costs, then it may be more appropriate for the PPMs to measure interval data. If such an assessment indicates that the benefits of interval meters do not exceed the costs, then it may be more appropriate for the PPMs to measure time-of-use data.

If PPMs measure interval data then this data can be used for wholesale market settlement. If PPMs do not measure interval data, then the energy is settled in the wholesale market on the basis of a profile.

[32] Ministerial Council on Energy, Communique, 1 August 2003, p.3.

Regulatory options

Regulatory options that may be considered to address potentially higher tariffs for those on PPMs include:

- if the PPM service were intended to be offered as a product of choice, and there were regulatory measures in place to ensure that consumers were provided with sufficient information to make an informed choice, then there should be no need for any regulatory intervention in PPM tariff setting because consumers would always have the option of falling back to the default tariff which is price monitored; or
- if the PPM service were not intended to be offered as a product of choice, then there might be a need for:
  - PPM tariffs to be subject to some form of regulation, such as a retail price cap; or
  - PPM costs to be smeared over all electricity consumers.

There are potentially significant economies of scale benefits attached to PPMs, if they grow in numbers as a consumer option. Furthermore, the greater the consistency of PPM regulations across the jurisdictions, the greater the potential for these economies of scale and therefore the lower the cost for consumers. Currently, no state has yet developed a regulatory framework for prepayment meters. However, Tasmania and NSW are in the process of doing so. If the decision was made to adopt PPMs for South Australia, the PPM system costs may be reduced if the regulatory framework for South Australia was consistent, as far as is practically possible, with the regulatory frameworks being developed in the other states.

If there is an expectation that an assessment of the costs and benefits of interval meters for South Australia would indicate that interval meters should be installed within the life of the PPMs (commonly 15 years), then an option could be to regulate that PPMs should be capable of measuring and recording interval data.

The costs associated with PPMs may be dependent on which party has the responsibility for providing metering services for PPMs (refer to Appendix D for further discussion on this matter).

Monitoring

If the PPM service were intended to be offered as a product of choice, then it would be important for ESCOSA to monitor whether consumers were able to make an informed choice (as discussed in section 6) and that there was no coercion of consumers (as discussed in section 10).

Other data to be monitored could include:

- published PPM tariffs, and comparison with other options;

- costs of PPMs; and
- the number of consumers with PPMs to gauge the extent of the economies of scale associated with point of sale infrastructure and back office systems across the consumer base.

It is also recommended that the following policy decisions be monitored:

- the appropriate party that should be responsible for PPMs (this is currently being considered jointly by the regulators as part of a review of metrology in the National Electricity Market); and
- the timing and scope of an assessment that may be required on the costs and benefits of interval meters (this is currently being considered by the Ministerial Council on Energy and has also been considered in the joint review of metrology by the regulators).

7.2 Cost not commensurate with a lesser service

It may be argued that PPMs provide a reduced level of service from the retailer to the consumer, as:

- the onus is on the consumer to perform a number of tasks that would be the responsibility of the retailer under other billing systems, such as responsibility for ensuring supply in response to payment, and providing an alert when payment is due; and
- under the PPM arrangement a number of tasks are not required to be undertaken by the retailer, such as meter reading and the issuing of regular bills.

There is therefore an ensuing argument that, as a lesser service has been provided, an appropriate reduction should be made in the costs to the consumer.

Further, as PPMs reduce bad debt, improve cash flow for the retailer and reduce costs such as meter reading, there is an argument that these cost savings should be passed on to PPM consumers with PPMs through reductions in tariffs[33].

Experiences in other jurisdictions

In other countries where the tariffs for consumers with and without PPMs are the same, this appears to result from a social policy intervention at work rather than a flow on of reduced costs in providing electricity through PPMs.

[33] The other side of this argument, that there are additional costs under PPM in setting up and maintaining a separate infrastructure, capital costs of meter purchase etc also needs to be taken into account in any final assessment of the validity of this issue.

In the lead up to setting the 2002 price controls in Northern Ireland, Northern Ireland Electricity and the Regulator agreed on a package of retail measures which included not charging 100,000 existing PPM consumers any more than a standard credit consumer. PPM consumers had previously paid a surcharge of £18 per year on the normal standard credit tariff. From 1 April 2003, PPM consumers have received a 2.5 per cent discount on the standard credit tariff.

In Ireland there is no additional charge on consumers for having a PPM. PPM consumers are cross-subsidised by other consumers and PPMs are therefore not available as a payment choice for consumers in general. However, there are a relatively small proportion of PPM consumers with PPMs in Ireland, and therefore other consumers are able to absorb the cross subsidy relatively easily.

Particular issues for specific consumer groups

Those particularly affected are consumers **on low incomes**. Those consumers for whom the tasks associated with having a PPM (monitoring consumption, purchasing credit and recharging the meter) are onerous may feel this issue most acutely. These are **older consumers**, **those with special health needs** and **those in rural areas**.

Technology

The way in which technology may address the cost component of this issue is the same as discussed in 7.1.

Regulatory options

The regulatory options for the cost component of this issue are the same as those in section 7.1.

Monitoring

The options for monitoring the cost component of this issue are the same as those in section 7.1.

7.3 Retaining energy concessions

The South Australian Government provides a concession to vulnerable households to assist with their energy costs (refer section 3.3).

Consumer groups have voiced concerns that, where PPMs are installed, there are no regular bills or centrally held consumer records, and therefore no automatic mechanisms built into

the system for deducting energy concessions. This issue has also been raised during consultation on PPMs in NSW[34].

Experiences in other jurisdictions

In Tasmania concessions are dealt with through a lower fixed charge to eligible consumers.

Particular issues for specific consumer groups

Consumers affected are **those on low incomes** and **older people** who would be eligible for an energy concession.

Technology

Different arrangements might be required depending on whether the consumer was a pensioner or a beneficiary. In the case of pensioners, the concession could be reflected in an adjusted fixed daily charge. All types of PPMs allow the fixed charge to be set for a consumer based on whether they receive a concession. However this option assumes that the standard daily fixed charge is greater than the daily concession.

In the case of beneficiaries it is likely that they may need to supply payment receipt details to Family and Youth Services (FAYS) in order to get an electricity credit note directly or trigger credit to be forwarded to the retailer for passing on to the beneficiary.

Regulatory options

Regulatory options that could be considered include:

- amending the government's concession schemes, which retailers are required to comply with, to ensure that concession holders with PPMs are accommodated.
- providing consumers with an initial statement confirming that they are receiving a concessionary rate;
- retailers issuing information to consumers specifying how concessions are to be paid.
- requiring energy concessions to be paid to eligible consumers via a reduction in the daily fixed charge. This requires the daily fixed charge to be greater than the daily amount of the energy concession; and
- requiring vending outlets to provide the consumer with a printout showing transaction details which they can then take to FAYS for reimbursement of the concession.

[34] Office of Fair Trading submission to IPART on the proposed Market Operations Rule on Prepayment Metering, March 2003.

Monitoring

This issue might be monitored through complaints received by the Ombudsman and/or the retailer.

Other indicators that might be monitored are:

- the total number of concession consumers; and
- the total number of concession card holders with a PPM installed.

7.4 Inability to retrieve credit

With some PPM technologies, credit purchased cannot be retrieved. This would mean, for example, that a consumer who had made a large credit purchase but who then became aware of other bills or costs that were urgent would not have the capacity to convert some of the prepaid electricity credit back into cash. The one-way nature of credit purchase severely limits the flexibility the consumer has in managing payment of costs, particularly unforeseen costs.

An allied issue is the inability, under some PPM systems, to retrieve credit when moving premises.

Although this issue can be contained to an extent by the consumer buying small amounts of credit, this means more frequent purchases, which can be inconvenient as well as having costs in terms of time and travel.

Experiences in other jurisdictions

There are no arrangements for withdrawing credit, while still remaining a PPM consumer, identified by the literature review.

Under the Tasmanian PPM system offered by Aurora, there is capacity for any outstanding credit to be downloaded to the smart card when the consumer is on the point of vacating the premises. The card can then be taken to a vending agent, the account settled and unused credit refunded to the consumer. The card is then retained by the vendor, acting as the retailer's agent. This effectively ensures that the credit is only redeemed on moving, when the card is no longer of use.

In Tasmania there is a limit of $100 on the amount of credit that can be purchased with the smart card.

Particular issues for specific consumer groups

The group most affected by the inability to withdraw credit generally are **those on low incomes**. Problems in withdrawing credit on moving out of a property will most affect **those using social housing or the pool of low cost rental housing**.

Technology

The magnetic card and keypad technologies can inform the retailer how much credit the consumer has purchased, but cannot tell the retailer how much credit is remaining on a meter for a consumer. The retailer would be required to manually read the meter to obtain this information.

The smart card technology is able to tell the retailer how much credit is remaining on a meter for a consumer. Therefore, the smart card technology can allow a consumer to retrieve remaining credit without the retailer manually reading the meter.

Regulatory options

The regulatory framework may assist by requiring refunds of credit to be provided to a consumer on moving properties or moving off the PPM system. However the capacity for withdrawal at any time is highly problematic and unlikely to be able to be accommodated in a PPM system.

In the event that the smart card was in use and there was therefore the capability of returning credit to the consumer, the issue of whether credit could be withdrawn on moving or terminating the PPM could be addressed by a requirement for remaining credit to be refunded to the consumer. The advantage of this approach is that consumers would not lose any remaining credit. The disadvantage is that it potentially imposes a cost on the retailer that might be higher than the value of remaining credit refunded.

The regulatory framework could be used to limit the amount of credit that could be purchased at any one time and could also be used to limit the amount of credit that was not returned to the consumer.

Monitoring

Monitoring would only be required if there was a requirement to refund remaining credit. This could be monitored through complaints to the Ombudsman and / or the retailer. If collecting data on complaints to the Ombudsmen, these need to be understood as an indication of a larger number of complaints as most complainants do not take their issue to the Ombudsman.

7.5 Linking past debt and current consumption

In a number of countries where PPM technology has been introduced, it has been designed in part to deal with bad debt problems. There are two clear reasons for the use of a PPM where a consumer has a bad debt history. One is to prevent such problems recurring and the second is to provide a mechanism for the retailer to retrieve past debt owed by the consumer. As there are different issues at the core of each situation, each needs to be considered separately.

In the former case, a PPM used as a form of assistance with budgeting can be advantageous for certain households who would otherwise have difficulty in finding funds to meet quarterly bills. However there is a potential issue of coercion which is discussed in section 10.

Using PPMs as a way to enforce debt recovery is more problematic from a consumer point of view, as it ties current supply to repayment of cost for past consumption. Debt repayment arrangements can include an additional usage rate or an additional daily fixed charge. Repayment through the daily fixed charge contains the impact of the debt repayment on the household budget compared to the uncapped, usage based repayment. An additional usage based payment means that, at times of high consumption and high electricity costs, ability to repay debt is lowest yet the repayment amount is highest and there is not necessarily any flexibility to tailor repayments according to peaks and troughs in consumption.

There is also a further issue about a household's ability to repay past electricity debt, especially in situations where the debt initially arose from competing cost pressures on the household budget which still may still apply in their current situation. It can be argued that, if a household could not keep up with electricity costs under past billing arrangements, they will not be able to do so under the PPM arrangement given they also have the debt repayment burden. The likely way for a household to deal with this is through:

- debt shifting, whereby the current electricity and past debt are paid but other bills are not, triggering bad debt in other areas;
- not purchasing essential items (other than electricity); or
- self-disconnection.

If a retailer were allowed to recover debt through a PPM, where the consumer gives their consent and this consent has not been coerced from the consumer, there may be advantages to the consumer in terms of convenience. There are a number of significant disadvantages of this being allowed:

- it provides the retailer with an incentive to move high credit risk consumers onto PPMs, and therefore increases the risk of coercion; and
- it potentially locks that consumer into the PPM while they are repaying their debt; and
- it potentially locks that consumer into that retailer while they are repaying their debt. In South Australia, consumers in debt are allowed to transfer retailer, except where the debt relates to a market or standing contract at a previous supply address.

From a consumer perspective it is not advisable to link debt repayment and the purchase of current electricity supply. If this linkage does not occur then debt recovery can occur in a way that is more flexible and accommodating of changing household cost pressures.

Experiences in other jurisdictions

In the UK, where the consumer has not paid their electricity bill, they effectively have the choice of disconnection or having a PPM installed and used for both debt recovery and consumption costs. Fourteen per cent of PPM based electricity consumers were repaying a bad debt in the UK. In New Zealand, a key government objective in relation to PPMs is to minimise the incidence of electricity supply becoming unavailable due to payment default or poor payment history[35]. In Ireland, where only a small proportion of the overall consumer market (1.8 per cent) have PPMs installed, this arrangement has usually been introduced in situations where the consumer has had payment difficulties.

The Tasmanian debt retrieval arrangement currently being piloted is consumption based with 1.5 cents being repaid per kWh used. This means that when consumption rises, as in winter when heating is required, debt repayment also increases making a double inroad into a household's budget. In the UK a ceiling applies to debt recovery, with a PPM not allowed to recover more than £2 of debt per week. This contains the impact on household budget compared to the uncapped repayment in the Tasmanian trial.

Particular issues for specific consumer groups

Those on low incomes are most affected.

Technology

For those consumers choosing to repay debt through PPMs, most modern PPM technology allows debt recovery through the following three mechanisms:

- repaying a certain amount of debt for each kWh used;
- deducting a fixed daily amount for debt repayment; or
- allocating a proportion of an electricity payment to debt repayment.

Regulatory options

The coercion issue may be dealt with through regulation that prohibits:

- consumers with bad debt history being forced on to PPMs; or

[35] Ministry of Economic Development New Zealand, *Inquiry into the Electricity Industry, Report to the Minister of Energy*, June 2001.

- consumers with bad debt transferring to a PPM system.

The repayment of past debt issue could be dealt with by:

- regulation that prevents past debt being repaid through PPMs; or
- restriction on the amount of debt that can be repaid or the rate of repayment.

If repayment via PPMs is allowed, the retailer could be required to provide information on options to the consumer.

Monitoring

If retailers are able to recover debt through a PPM, then monitoring signs of possible coercion becomes very important. Other indicators that might then be monitored are:

- total number of consumers on debt recovery;
- total number of new consumers on debt recovery since the last report;
- statistics on the amount of debt being repaid;
- statistics on the allocation of prepayments between debt recovery and meter credit;
- statistics on self-disconnection for consumers on debt recovery;
- total number of consumers who are repaying debt through other mechanisms;
- total number of new consumers repaying debt through each of the other mechanisms; and
- the average amount of debt being repaid through other mechanisms.

In relation to coercion, and where installation of a PPM is allowed following bad debt, monitoring could include:

- the number of consumers with bad debt history who transfer to a PPM;
- the information provided to the consumers before this choice is made; and
- numbers of consumers with bad debt history that transfer to a PPM.

7.6 Entry, exit and transaction fees

Entry and exit fees can apply to those moving onto or off a PPM arrangement. Costs for moving on and off the system can be significant and the overall impact is even more pronounced for people who are highly mobile, moving frequently between rental accommodation units.

Under PPMs there are also transaction fees, incurred when credit is purchased, which are not a feature of other billing arrangements. These will effectively add to the costs borne by the consumer.

Experiences in other jurisdictions

In Tasmania there is a connection charge of $50 for moving on to a PPM system. A charge of $25 applies if a consumer moves into premises where a PPM already exists and where they choose to move on to this form of payment. An exit fee of $50 also applies. There are exceptions to this. There is a three month cooling off period following commencement on a PPM system and a 28 day period following notification of a tariff change where exit fees do not apply.

In the Tasmanian PPM situation, the entry costs can be paid off through the smart card along with consumption costs. This will increase the overall debt burden, particularly where past bad debt is also being repaid, with associated impacts on household budget as discussed in section 7.5.

Particular issues for specific consumer groups

Those on low incomes, who can least afford additional costs, and those using the pool of **social and low cost rental housing,** who are most mobile, are most affected by entry and exit fees**. Those on low incomes,** who may have more frequent purchases of credit, are likely to be most affected by transaction fees.

Technology

The PPM technology *per se* cannot address this issue, except to the extent that transaction costs differ between technologies.

Regulatory options

Consumers should be aware of entry fees, particularly where they do not have to pay these up front but can incorporate them into debt to be repaid. Exit fees can be of concern because they have the potential to lock a consumer into the PPM and into the retailer. Regulatory options that may be considered to address fees issues include:

- ensuring that entry, exit fees and transaction fees are disclosed in the information provided to consumers before they provide consent to have a PPM installed (refer to section 6.1); or
- placing a cap on entry, exit and transaction fees. This might ensure that exit fees do not create a barrier to consumers wishing to move off a PPM, but may be set at a level below actual costs of exit. The limit on the transaction fee (which might be zero) has the advantage of helping remove a barrier to consumers purchasing credit as frequently as they desire and will help consumers compare their costs under a PPM to those on a normal credit meter.

Monitoring

Data monitored should include published entry, exit and transaction fees. Consumer complaints to the Ombudsman in relation to the fees charged could be also monitored, with data on the number of complaints understood as indicative of more widespread concern among consumers over fees.

7.7 Potential for debt accumulation when no service provided

Where a fixed daily fee is charged in addition to the usage charge, this charge continues to accrue even after disconnection occurs. This means that the consumer is compelled to pay costs for a service that they are not receiving and that debt accumulates although no electricity is being consumed.

A further issue linked to the fixed cost component of the PPM tariff structure is the potential for a consumer to inadvertently trigger disconnection when they are absent for a period of time. These situations would include planned absences as well as those that are unplanned as in the case of hospitalisation. In such instances the consumer may assume a low level of cost, such as when only a fridge is left running, or no costs if all appliances are turned off, without taking into account the fixed cost charges that accrue on a daily basis. Unplanned disconnection can result, leading to spoilage of food and inconvenience.

Experiences in other jurisdictions

This is a feature of all PPM situations where a fixed daily cost is charged. This is avoided in South Africa where consumers are charged a single flat tariff. In Missouri in the USA, PPM trials include load limiting to allow a trickle of electricity during the winter months to households that would otherwise be disconnected.

Particular issues for specific consumer groups

All consumers are affected by having to pay daily costs irrespective of whether a service is provided or not. **Older people**, or **those with special health needs** who may be absent from their home due to unplanned hospital admission or when treatment is required, may be at particular risk of unintended disconnection.

Technology

Each of the different types of PPM technology allows a discretionary fixed daily charge. If this functionality is not used (because of the tariff structure used), the problem is avoided.

Load limiting is a further option to keep basic lighting and appliances such as the fridge operating.

Regulatory options

The regulatory framework could be used to ensure all PPM charges are consumption based, if the issue was thought significant enough to warrant this intervention.

The regulatory framework could also be used to specify load limiting capabilities be included in PPMs installed.

Monitoring

Surveys of PPM consumers represent the best way to track disconnections that arise from the fixed daily charges accruing.

7.8 Cost on the consumer to purchase credit

Consumers who have PPMs bare the costs of purchasing credit, including the time, transport costs and inconvenience. Time and transport costs can be anticipated to increase in inverse proportion to income, as lower income consumers are likely to buy electricity credit in smaller amounts and so need to make more purchases.

Purchasing arrangements also put the responsibility on to the consumer to arrange credit and ensure ongoing supply. This issue is discussed further in section 9.1.

Experiences in other jurisdictions

In some situations, such as the UK, codes of practice submitted by each electricity licensee are meant, among other things, to relate to proximity of points of sale and hours of operation of vendors. Ofgem expects consumers to be no more than one mile from a point of sale. In the Australian context this level of proximity is hard to achieve and the Tasmanian PPM experience has shown that consumers can be considerable distance from a point of sale. In Tasmania there is a 20 km limit to the distance between the point of sale and the consumer. Consumers beyond this limit can still have PPMs installed if they sign a waiver.

Particular issues for specific consumer groups

Those most likely to be disproportionately affected by the consumer responsibilities associated with a PPM installed are **low income** households, who will buy smaller amounts of credit more frequently. **Older people**, **those with special health needs** for whom purchase trips may be onerous, and **those living in rural areas** will also be particularly affected.

Technology

Smart card and magnetic card PPMs require the consumer to purchase credit at a physical outlet. In addition to purchasing credit at a physical outlet, keypad PPMs allow consumers to purchase credit via the telephone or internet, if these vending options are utilised by the retailer. However, these technologies may not be suitable for some consumers who are unfamiliar or unable to use them, as in the case of those with visual impairment. This is an example of how one technology may address a particular consumer issue but triggers or exacerbates another.

Regulatory options

The nature of the PPM system means that the cost of transport (for vending machine purchase) and responsibility to purchase credit will reside with the consumer.

However, consumers could be unreasonably inconvenienced if an outlet near their home was closed. Therefore, regulatory options that may be considered include requirements:

- to ensure that consumers are provided with information about vending outlets before they provide consent to have a PPM installed;
- to specify the minimum opening and closing times of vending outlets; and
- to specify a maximum distance that a consumer's residence should be from the nearest vending outlet.

Monitoring

Consumer complaints to the Ombudsman relating to difficulties with credit purchase could be monitored.

If necessary, the location, proximity to PPM consumers and opening and closing times of each vending outlet for each retailer may be monitored.

Copies of PPM information provided to consumers by retailers could also be monitored.

7.9 Accuracy of meters

The Australian Standard for accuracy of domestic meters requires a higher level accuracy than the international standards, which govern the design of meters manufactured overseas. Currently the accuracy requirements in the Australian Standards are optional, and the accuracy requirements in jurisdictional instruments such as the Electricity Metering Code may vary these requirements. However changes that have been foreshadowed to the National Measurements Act may require electricity meters to comply with the Australian Standards.

As PPMs are manufactured overseas, their accuracy may not meet Australian standards. If the PPMs are required to meet the Australian Standards then the number of different types of PPMs that may be installed is very limited. In the absence of competitive pressure, this may result in a higher price for PPMs.

The conventional accumulation meters currently do meet the requirements of the Australian Standards. If PPMs are installed that do not meet the requirements of the Australian Standards, there may be a greater error in the measurement of electricity consumed. If there is greater error in the measurement, consumers could pay more for the electricity they have used.

A further issue is associated with measurement error. If there is a measurement error in a conventional accumulation meter, this is likely to be detected by a meter reader (through a visual inspection when reading the meter) or through the process of validating the meter reading. The meter reading is then substituted and the meter repaired or replaced. If there is a measurement error in a PPM, the consumer will continue to pay at the incorrect rate until the error is detected. The incorrect rate could be higher or lower than the correct rate.

Experiences in other jurisdictions

The PPMs installed in Tasmania do not comply with the accuracy requirements in the Australian Standards.

Particular issues for specific consumer groups

This issue has the potential to impact on all consumers but **those on low incomes** will be most affected by higher costs of PPMs or any over payment.

Technology

Most PPMs meet the accuracy requirements of the international standards and do not meet the accuracy requirements of the Australian Standards. That said, many do meet the accuracy requirements of the existing jurisdictional instruments. The Australian PPM market is considered to be small by most overseas manufacturers to design a meter specifically for this market.

PPMs with smart card technology may be able to provide a remote indication that the meter is faulty.

Regulatory options

If Australian metering standards are applied to electricity meters, then some PPMs might not meet these standards. One option is to amend the regulatory framework in relation to the accuracy requirements for PPMs.

To facilitate the identification of faulty meters, the regulatory framework could require that PPMs are able to indicate remotely if a fault has occurred.

Monitoring

The accuracy requirements of domestic meters are currently being considered to determine whether they should be amended in line with international standards or whether the more stringent Australian Standards should continue to apply. This debate could be monitored to determine whether it has an impact on the PPMs that may be installed in South Australia.

8 Disconnection

A recent Senate Inquiry[36] noted that the impact of disconnection was loss of refrigeration, inability to keep fresh food, frozen food being spoiled, no hot water for cooking or washing, and no heating or light. Submissions to the Inquiry argued that light, heating and cooking are essential elements to a reasonable standard of living. One submission noted that disconnection is particularly stressful for people with young children, the elderly and infirm and those living alone.

Whilst some consumers are disconnected with conventional meters, it may occur more frequently with for consumers with PPMs, because consumers are provided with less credit.

8.1 Health and safety implications of suspended supply

A key issue underpinning a number of other specific concerns about disconnection is that electricity is an essential service, with significant health and safety implications in the event of suspension of supply. The exact impacts of disconnection will depend on the nature of the consumer household affected, their needs and the season of the year. At the least, lighting and food storage will be affected and heating may be stopped. Uniting Care (NSW/ACT) is of the view that disconnection for low income consumers can be inherently dangerous because the use of alternatives, such as candles or poorly maintained kerosene heaters, can lead to house fires.[37]

Impacts of disconnection can be significant where special health needs mean a consumer is dependent on medical equipment. For this reason most jurisdictions do not allow disconnection of consumers on life support systems. However there are also other types of equipment, such as nebulizers used for asthmatics, which may also be essential but which may not fall into the "life support" category.

The duration of supply suspension will depend on the ease of purchasing credit, and the financial capacity of the consumer at the time of disconnection.

Experiences in other jurisdictions

Retailer policies in the UK and Tasmania aim to avoid disconnection at times when it is not necessarily possible or convenient to purchase additional credit (between 8 pm and 8 am). In some jurisdictions disconnection cannot occur on weekends and public holidays.

In some places where PPMs are being used, there is a guaranteed minimum supply that is available when credit has been used up. Load limiting, as an alternative to emergency credit,

[36] Parliament of Australia, *Senate Inquiry Into Poverty and Financial Hardship*, 2004, p. 191.

[37] Uniting Care (NSW.ACT) submission to IPART on the proposed Market Operations Rule for Prepayment Metering, 19 March 2003.

has been used in a pilot in Missouri, USA. This is referred to as "cold weather protection". There is no emergency credit provided but limited electricity is provided from November through to the end of March (covering the northern hemisphere winter) and the amount is increased where heating is electric. This limited supply aims to meet basic health and safety requirements.

It is possible that this minimal supply arrangement will be continued by the consumer, and could lead to accumulated debt that needs to be repaid before normal supply can recommence. To deal with this, the Missouri pilot requires consumers with a negative credit balance to make purchases of at least $US75 or the amount owed, whichever is less, each 30 day period if they are to avoid the disconnection of the service.

A further option is the South African arrangement under which 50 kWh per month of free electricity is given to PPM consumers who are living in poverty.

Particular issues for specific consumer groups

Disconnection has major impacts for most of the consumer groups considered in this report.

Those on **low incomes** are more vulnerable to disconnection. Those from **culturally and linguistically diverse backgrounds** may face particular barriers in understanding how to avoid disconnection. They may also not be familiar with using the PPM system to time when disconnection occurs, for example, by reducing consumption so that supply was maintained until the 8pm to 8am period during which disconnection may not be allowed to occur.

Disconnection may be a particular issue for **older people** who may not be able to easily make the trip to purchase credit and for whom lighting and heating is particularly important. Those with **special health needs**, who may be highly dependent on electricity supply for heating or operation of equipment that is necessary because of their condition, are also at particular risk in the event of disconnection.

In addition, there may be barriers to easy purchase of credit for **those in rural areas**, who are not close to a purchasing point.

Technology

Most PPM technology provides visual and audible warning when credit reaches a certain low level. Therefore, as long as the PPM display is conveniently located, consumers should be aware when their credit is near to running out. When meters are outside or inconveniently located, this warning is of no real benefit. Split system meters, where the display component can be kept inside, address this problem.

Some PPM technology can provide one or more of the following functionality:

- a limited flow of electricity once credit has expired. This limited flow of electricity can be programmed to stop after a certain period;
- emergency credit once normal credit has expired; and
- a limitation on the time when disconnection occurs. Some can also limit the days when disconnection occurs, for example preventing disconnection on public holidays.

Debt will continue to accumulate in all three modes.

Regulatory options

Regulatory options that may be considered to address this issue are:

- prohibiting installation of PPMs where a member of the consumer's household requires life support equipment. This arrangement might be extended to those with life threatening conditions but not on life support. It has the advantage of not exposing critical equipment to the higher risk of disconnection that accompanies PPMs;
- to require disconnection times and days for credit consumers and PPM consumers to be the same (see section 3.2.3 for an outline of current requirements). This will provide PPM consumers with the opportunity to reconnect promptly if they are able to pay for more electricity. However such a requirement may limit the types of PPMs that may be installed, particularly if disconnection on a public holiday is not permitted;
- a requirement that a certain amount of emergency credit is provided. The number of days of credit would be determined in part by any arrangements to prohibit disconnection at certain times. The level of credit provided needs to take into account different reasons for disconnection:
  - if a few days of emergency credit were provided, then this is only likely to reduce disconnection rates for consumers who forget to top up their meter. Whilst this in itself is perhaps a justifiable reason for providing emergency credit, providing a few days credit will be of less assistance for consumers with financial problems;
  - if a few weeks of emergency credit were provided, then this might provide a reasonable period for consumers in short-term financial difficulty to find the money to remain connected. Practically, however, consumers may simply treat the end date for emergency credit similarly to the end date of normal credit and incur more debt;
- a requirement that a minimum flow of electricity is provided for a certain period (e.g. 30 days) after credit has expired. This has the advantage that consumers in financial difficulty will have a reasonable period, during which they will receive a minimum level of supply, and over which to find the money to remain connected. Since consumers would only be receiving a minimal flow of electricity, there is likely to be an incentive to restore full supply. In addition debt accrual is contained. This option has the disadvantage that the extra functionality will add to the cost of PPMs; or

- a requirement that a minimum flow of electricity is provided on an ongoing basis once credit has expired. This has the advantage that all consumers will be guaranteed a minimum level of supply but the disadvantage that a consumer could accumulate so much debt that they have no choice but to live off the minimal flow provided. Retailers may also experience higher levels of bad debt.

Monitoring

This issue might be monitored through:

- the number of consumers disconnecting, and statistics on the frequency and duration of disconnection;
- the number of consumers using emergency credit, and statistics on the frequency and duration of emergency credit; and
- the number of consumers whose PPMs went into load limiting mode, and statistics on the duration and frequency of PPMs going into load limiting mode.

This information could be collected either:

- directly from retailers. The advantage is that the information the retailers will collect on meter modes would be accurate. A disadvantage of this approach is that this requirement would lock retailers into only using the more expensive smart card PPM technology; or
- through a periodic consumer survey. An advantage of the consumer survey is that additional information could be collected from consumers, such as the reasons why they self-disconnected. A disadvantage is that consumers may not provide frank, accurate information.

8.2 Inevitability of disconnection in very vulnerable households

Disconnection for financial reasons is a major issue, particularly given the low-income consumer base that has typically used PPMs in other countries.

Debt juggling is a routine part of financial management for many low income households (refer to section 5.1). This means that choosing to pay one bill may require being overdue in paying another. However the limited emergency credit on PPMs and the lack of a relationship with the retailer which encompasses payment arrangements means that inability to pay electricity costs, which requires payment in advance, will often result in disconnection.

The frequency of disconnection indicated by available survey data highlights the need to adequately gauge the levels of emergency credit that should be provided. This issue is discussed in the following section.

A related consumer issue is that there are other financial impacts for low-income households in addition to disconnection. Reduced flexibility for the consumer results from the PPM billing arrangement as there is less credit available relative to other options. As a result, a consumer's capacity to juggle debt is severely reduced.

Experiences in other jurisdictions

In the UK, the Ofgem quarterly monitoring for 2003 showed that 24 per cent of consumers with PPMs disconnected in the previous year[38]. A survey by the UK Electricity Association conducted in 2000 showed similar disconnection rates with PPMs and indicated that a quarter of these consumers stated that they disconnected for financial reasons.[39] This suggests that at least six percent of consumers with PPMs had financial problems in securing electricity supply.

According to the UK Electricity Association survey, 6 per cent of all consumers with PPMs, disconnected three times or more in the previous year and 4 per cent (one in a hundred PPM consumers) disconnected more than 20 times.

Disconnection data is not available from other jurisdictions where PPMs are installed. This is an issue in itself about data collection where PPMs are installed and will be referred to again in section 11.

Particular issues for specific consumer groups

Low-income groups are most affected.

Technology

The potential role of technology to minimise the impact of disconnection is the same as that discussed in section 0 above

Regulatory options

The potential role of the regulatory framework to minimise the impact of disconnection is the same as that discussed in section 0 above

[38] Ofgem, *Social Action Plan Indicators*, September 2003 Quarter

[39] The main reason for disconnection given in this survey was "forgetting" (47 per cent of disconnections in the previous year). It is plausible that some consumers chose this answer rather than admitting affordability reasons. This would mean that financial difficulty was a more significant reason for disconnection than the 26 per cent indicated in survey results

Monitoring

See discussion under section 0.

8.3 The amount of emergency credit is inappropriate

Any emergency credit facility should be set at a level which is high enough to give consumers a reasonable amount of time to purchase credit but low enough so that the consumer does not incur too much debt on emergency credit.

The amount of emergency credit should take into account the reality that those on low incomes will not necessarily have funds immediately available to purchase additional credit and some leeway should be provided. Similarly some consumers may have difficulty accessing a point of sale, because of issues such as distance or mobility problems, and again there is an argument for reasonable leeway to be provided in the form of emergency credit.

There is also an argument that the level of credit can be too high to serve effectively as an interim supply arrangement, and that extended supply may give the consumer a false sense of security. They then have to pay for emergency credit used as well as purchase of additional credit in their next purchase. This can represent a significant cost to those on low incomes and can work against the benefits of PPM in preventing large bills.

This issue is not clear-cut, especially when viewed alongside other arguments that point to the low level of credit (when compared to other billing methods) as a major problem in this model. Issues in relation to PPMs are relative to the specific consumer context, so that what is an advantage for some households will serve as a disadvantage for others.

Experiences in other jurisdictions

In Tasmania $5 emergency credit is available (enough for about 2 days).

The NSW draft Market Operations Rule (MOR) prepared in February 2003 proposed emergency credit of $25 which represents an estimated 8 to 12 days of supply. A number of submissions regarded this as being too high.

In the Missouri, USA trial, load limiting is used in the winter months instead of disconnection as a form of emergency credit.

In South African 50 kWh per month of free electricity is given to PPM consumers who are living in poverty.

Particular issues for specific consumer groups

Those most affected by an inappropriate amount of emergency credit are **low-income households**, who are at increased risk of disconnection, and those for whom the consequences of disconnection are particularly dangerous (**those with special health needs and older consumers**).

Technology

Some PPMs do not provide emergency credit.

Regulatory options

The level of emergency credit may be regulated to ensure it provides a reasonable number of days' supply. Care needs to be taken to ensure that it is set at an appropriate level that avoids issues that may arise if it is set too high or too low. An increased level of emergency credit could be specified for those with special needs.

Monitoring

Monitoring could be through consumer survey.

8.4 Onus on the consumer to avoid disconnection

Where a PPM is installed, much of the onus to ensure continuation of supply is placed on the consumer. Disconnection can therefore occur as a result of a deliberate decision not to purchase credit, and can also occur through error, for example where consumers forget to buy credit for their meter, because of poor time management or through misreading the meter.

Experiences in other jurisdictions

The survey by the Electricity Association in the UK conducted in 2000 showed that, of those disconnected, 47 per cent gave the reason as forgetting to recharge with credit[40].

Particular issues for specific consumer groups

This issue affects all consumer groups although impacts of disconnection will most affect **older people** and **those with special health needs**.

[40] Electricity Association, *Affording Gas and Electricity: Self-Disconnection and Rationing by Prepayment and Low Income Credit Consumers and Company Attitudes to Social Action*, March 2001.

Technology

Most PPMs provide an audible and visual warning when credit levels are low. If the meter display is inconveniently located, this reduces the likelihood that the consumer will become aware if their credit is low. Split meters could allow meters displays to be installed indoors in a convenient location.

Regulatory options

Whilst the onus on consumers with PPMs to avoid disconnection cannot be avoided, regulatory arrangements can assist consumers, for instance:

- with regard to location of meters, refer to the regulatory options discussed in section 9.3;
- with regard to the operation of the meter, refer to the regulatory options discussed in section 9.5; or
- a requirement to provide visual and/or audible warning that can be detected by the consumer when credit is low.

Monitoring

See discussion of monitoring options under sections 9.3 and 9.5.

8.5 Disconnection due to meter fault

Consumers with PPMs generally have a higher risk of disconnection if there should be a fault with the meter, compared with the conventional accumulation meter.

Experiences in other jurisdictions

Under the UK's Guaranteed Standards of Performance regulations in electricity, distributors are required to respond to PPM faults within a set timescale - three hours on weekdays and four hours at weekends. Performance under this Standard is monitored. In the year ending March 1999, distributors reported nearly 36,000 PPM faults with 48 incidents reported where the response standard was not met.

Technology

Different PPM technologies may have different risk of faults occurring, and also different risks of a fault resulting in a disconnection. PPMs with smart card technology may be able to provide a remote indication that the PPM is faulty.

Regulatory option

Regulatory options that may be considered for this issue are:

- specifying a timescale within which a fault should be fixed;
- specifying that meters or meter boxes must display a telephone number to call for faults; or
- specifying that PPMs should be able to indicate remotely if a fault has occurred.

Monitoring

Indicators to monitor may include:

- number of faults reported; and
- number of faults not fixed within the specified timeframe.

9 Consumer's operation of the system

Where a PPM is installed, consumers have a much more active involvement in ensuring their electricity supply is ongoing than with other types of metering arrangements. In addition to these responsibilities, the technology used is relatively new and can pose challenges for some consumers. In this section the following issues in relation to the consumer's operation of the system are outlined:

- the onus on the consumer with a PPM installed;
- access to points of sale for credit;
- location of meters; and
- physical operation of the system; and
- understanding how to operate the system.

9.1 Onus on the consumer

Where a PPM is installed, much greater effort is required on the part of the consumer than under conventional metering arrangements. Responsibilities include regular monitoring of credit levels, purchase of credit and recharging of the meter. If consumers wish to monitor their electricity use over time, then they must keep records of electricity use.

Experiences in other jurisdictions

Wherever PPMs are installed consumers must play a more active role in ensuring supply.

Particular issues for specific consumer groups

The types of consumers most likely to be impacted by operational issues are **older people** who may find monitoring the meter and buying credit onerous, particularly if they have mobility problems. There are similar issues applying to those with **special health needs**, especially where those needs may impair their ability to access or use the meter. There may also be problems for **those in rural areas** if vending points for purchasing credit are not conveniently located.

Technology

The necessity to monitor credit levels, purchase credit and recharge the meter is inherent in the use of the PPM technology and to a large extent the onus on the consumer cannot be avoided. However, some PPM technology makes monitoring simpler than other technology. Some consumers may find the display easier to read on one PPM meter compared to another, for example.

Regulatory options

The regulatory framework may facilitate the use of PPMs but cannot remove this onus from the consumer. Options for increasing the usability and consumer operation of the system are discussed in sections 9.4 and 9.5 below.

Monitoring

Monitoring of consumer purchasing patterns (frequency and amounts) can provide information on this aspect of the onus on consumers. Other responsibilities such as the extent to which consumers monitor the PPM can only be provided through surveys.

9.2 Access to points of sale for credit

An associated issue is the number and location of points of sale for electricity credit**.** Depending on their location, points of sale may require consumers to travel long distances or travel to outlets that are difficult to access without a car. For those with mobility problems even a short distance may be difficult to manage or may require the consumer to enlist the aid of another person to purchase credit. Convenience is not just a function of distance but also of hours operation of the vending point. This issue has been discussed above in section 7.8.

9.3 Location of the PPM

Consumers with PPMs need to access their meter frequently and therefore the physical location of the meter is a consideration, both in terms of whether the display unit is located outdoors or indoors, and the height at which it is located. Additionally a meter display located outside could result in difficulty reading the meter at night and in the daylight glare.

Experiences in other jurisdictions

It is understood that new PPMs in Tasmania are installed to replace the existing meter. In most cases this is on the outside of the property and it may be positioned inconveniently for some consumers to access the meter, especially those with mobility problems.

In the UK most electricity meters are located internally.

Particular issues for specific consumer groups

Groups most affected are **older consumers** and **those with special health needs** that may impair mobility.

Technology

PPMs are often located in outside meter boxes because the cost of rewiring to move the meter box inside is usually prohibitive.

Some PPMs can be offered as a split meter, that is, the display which the consumer reads is in a separate unit to the actual meter which can be located in the consumer's meter box. This makes it possible to locate the display unit in a location that is more convenient for the consumer. The additional cost of this split unit is significant but not prohibitive. We have been advised that the indicative additional cost is $100 to install a split meter[41].

Regulatory options

Regulatory options that may be considered to address this issue are:

- specifying the minimum requirements in relation to the location and lighting of meter displays. The advantage of this approach is that this would ensure all retailers would adopt the same standard;
- a requirement for the retailer to develop a PPM Code of Practice that must be approved by ESCOSA. The PPM Code of Practice would address the location and lighting of meter displays; or
- a requirement that the information provided by retailers to consumers identify where the PPM would be installed and the associated difficulties that the consumer may experience with this location.

Monitoring

Monitoring of this issue is not essential so long as consumers are aware, before they provide their consent for a PPM installation, of the location of the meter display. However, indicators that could be monitored are:

- number of PPM meter displays inside and outside;
- total number of meter displays inside and outside; and
- number of PPM meter displays moved inside.

It would also be of value to monitor the costs of the split meter unit.

[41] Advice from Landis+Gyr, 16 March 2004.

9.4 Physical operation of the system

The PPM system depends on the consumer being able to read the display showing credit status, to recharge with credit and, if it is necessary, to reconnect after disconnection.

For many consumers this may pose no difficulty. However, there may be practical problems in operating the system for those who have a degree of visual impairment and or who are not familiar with using such technology, such as some older people. Placement of meters in inconvenient locations or at inappropriate heights or with inadequate lighting may compound these problems and has been discussed in section 9.3 above.

Experiences in other jurisdictions

The literature review did not identify any survey or other data on the ease with which consumers can use the PPM. However the surveys did indicate that consumers were generally satisfied with PPMs, which suggests that the physical operation of the system may not be a major issue.

Particular issues for specific consumer groups

Older people and **those with special health needs** affecting mobility would be most affected.

Technology

Some PPM technology is easier to use than other technology, but generally PPMs have been designed to be intuitive to use. KPMG is not aware of any PPM that has been specifically designed for visually impaired persons.

Regulatory options

Regulatory options, which may be considered to address this issue, are:

- no action. Let consumers decide for themselves whether PPMs will suit their needs; or
- a set of requirements specifying the type of information to be displayed, and how it should be displayed (e.g. size of characters); or
- a requirement that PPMs be adapted for use by a range of people with a disability, recognising the significant cost that may be incurred in doing so; or
- a requirement that a PPM Code of Practice address this issue.

Monitoring

It might be useful to monitor the developing technology, specifically in relation to PPMs for the visually impaired or those with other disabilities.

9.5 Understanding how to operate the system

It is particularly important that consumers have a detailed knowledge of the operation of their PPM and in particular the emergency credit facility. Emergency credit is fundamental to ensuring continued supply in a situation where the onus to do so is on the consumer.

Experiences in other jurisdictions

Surveying in the UK has indicated that eight per cent of consumers with PPMs were not aware of the emergency credit facility and that 12 per cent did not know how to use it. Further, research for the Fuel Poverty Task Force found that one reason for consumers with PPMs self-disconnecting was a lack of knowledge about the operation of their PPM and in particular the emergency credit facility.

The UK situation highlights the need for clear information about PPM, both at the point of entry to the system and during the duration of the consumer's use of this arrangement.

Particular issues for specific consumer groups

For those from **culturally and linguistically diverse backgrounds** who may not be proficient in English, gaining the necessary understanding of how to operate the PPM may be more difficult than for other consumers, depending on how information is conveyed.

Older people, who may be unfamiliar with new technologies, are also likely to be affected.

Technology

Some PPM technology is easier to use than others. A number of consumers may find the smart card technology easier to use, for example, than the keypad technology which requires up to 20 numbers to be correctly entered into the PPM. Developing an understanding of how to operate the system will depend on how difficult is to operate, and the quality of the instructions provided.

Regulatory options

Regulatory options for addressing this issue are:

- requirements specifying the information that should be provided to consumers on how to operate the PPM system; or
- a requirement that a PPM Code of Practice address this issue.

Monitoring

Monitoring the ease with which different groups of consumers are able to operate the system would be important. This is best done by consumer survey.

10 Coercion

Coercing consumers to install a PPM was a prominent issue raised in the submissions to the New South Wales consultation on PPMs. Coercion of consumers may arise through:

- coercion to install a PPM which may be applied by retailers to consumers with a bad debt history;
- pre-existing meters in a property providing an incentive for the consumer to maintain this metering arrangement;
- coercion by village/park owners who may install PPMs so that tenants have no choice about their metering arrangement;
- barriers to switching metering technology as a result of the cost of switching meters, or debt which is being paid off through the PPM; and
- barriers to switching retailer for consumers in debt or in situations where PPMs are not offered by all retailers.

10.1 Coercion to install a PPM because of past bad debt

There is a risk that retailers will try to coerce consumers into installing PPMs where there is a history of bad debt. Additionally, consumers may believe they have no choice but to use PPMs given their bad debt history even where this is not the case. Both actual and perceived coercion are problematic in the context of the consumer's right to choose the metering arrangement most appropriate to their needs. The NSW Office of Fair Trading is of the view that effective protection from coercion is the most important consumer protection issue in relation to PPMs.[42]

Coercion (either actual or perceived) can apply to entry to the PPM system or to maintaining such an arrangement. The perception of consumers that they cannot exit the system is discussed in section 10.4.

Experiences in other jurisdictions

In the UK there is a strong link between the installation of PPMs and consumers with histories of bad debt, with 13 per cent of consumers with PPMs having bad debt. In Ireland, the PPM option has been used as a way of dealing with those consumers who had a history of payment difficulties.

Tasmania is trialling repayment of previous electricity debt through PPMs.

[42] NSW Office of Fair Trading, submission to IPART on the *Market Operations Rule for Prepayment Metering*, 9 April 2003.

Particular issues for specific consumer groups

Low-income consumers are most likely to have a bad debt history and be coerced to install a PPM. Those from **culturally and linguistically diverse backgrounds** may perceive coercion where it does not exist due to inadequate information about the PPM system and their rights.

Technology

Most PPMs have the option to allow the recovery of bad debt.

Regulatory options

Regulatory options that may be considered to address this issue are:

- preventing consumers in debt moving to a PPM; or
- ensuring that consumers can make an informed choice by providing sufficient information (refer to section 6).

Monitoring

Evidence of coercion through, for example, substantiated complaints to the Ombudsman or consumer advocacy groups, should be monitored.

10.2 Pre-existing meters

Where there is an existing PPM in a property there may an incentive for a tenant moving in to maintain this arrangement rather than to consider which billing method is best given their circumstances.

As PPMs tend to be installed for low income consumers, there is potential for PPMs to proliferate in the pool of social and low cost rental housing, especially given high turnover in this stock relative to other forms of housing tenure. This would effectively magnify the potential for tenants to be coerced into using PPMs.

Experiences in other jurisdictions

In Tasmania, there is a discounted establishment fee of $25 (compared to the usual $50) if a new tenant moves into a property that already has a PPM and chooses this billing arrangement. Consumers may be persuaded to use the PPM on the basis of the perceived cost saving.

Technology

Not applicable.

Regulatory options

A regulatory option that may be considered to address this issue is a requirement for parity between entry costs for all metering options.

Monitoring

Where PPMs were installed, ESCOSA could monitor the proportion of tenants moving in that retain the PPM, and the proportion that revert to conventional metering.

10.3 Coercion by village/park owners

This issue has been raised by a number of consumer groups as a possible future problem. In particular the Park and Village Service (NSW) was concerned that PPMs will be seen by village/park owners as an attractive means to minimise debt, park residents will have little choice because the park owner will coerce park residents into accepting PPMs and residents will then be locked into PPMs.[43]

An additional complexity is that the jurisdiction of the Ombudsman does not include those living in caravan parks, and it is problematic for ESCOSA to enforce the regulatory framework in caravan parks.

Experiences in other jurisdictions

None identified.

Particular issues for specific consumer groups

This is likely to be a particular issue for consumers on **low incomes**. Park residents are often particularly vulnerable, and include those who have not been able to sustain rental tenancies. Given the incidence of financial hardship among park residents, the affordability issue of PPMs is significant.

[43] Park and Village Service submission to IPART on the proposed Market Operations Rule on Prepayment Metering, 26 March 2003.

Technology

Not applicable.

Regulatory options

Regulatory options to consider to address this issue are to:

- prohibit on-sellers of electricity from installing PPMs; or
- prohibit on-sellers of electricity from installing PPMs unless explicit informed consent has been provided by the resident concerned.

Legislative changes may be required to improve the enforceability of the regulatory framework in caravan parks to allow the above regulatory options to be implemented.

Monitoring

Any evidence of coercion by park/village operators might be monitored through consumer advocacy groups.

10.4 Barriers to switching technology

Barriers to switching to a meter other than a PPM can potentially occur as a result of the cost of switching meters. This can serve as a disincentive because of the financial impact in the short term even though in the longer term, alternative billing arrangements may be cheaper.

Where a consumer has been locked into a debt repayment plan using PPM, and there is still debt remaining, this may represent a barrier to changing billing arrangements. This barrier may result from the consumer having to take responsibility for negotiating an alternative repayment method with the retailer where it is not clear to the consumer if or how this can be done or how to initiate a new arrangement. In other situations the consumer may be tied into a PPM arrangement until they have repaid their debt.

Experiences in other jurisdictions

In the UK, once a consumer is repaying debt through a PPM they are effectively locked into that arrangement until they have paid off their debt.

Consumers in Tasmania can move off their PPM free of charge during an initial three month cooling off period and for a period of 28 days after a tariff change is announced. Otherwise consumers pay a $50 exit fee.

Particular issues for specific consumer groups

Low income consumers are most likely to be repaying debt through a PPM, where this is allowed. They are also most likely to be influenced to retain a PPM by the exit fees incurred by switching.

Technology

Most PPMs allow recovery of debt.

Regulatory options

Regulatory options that may be considered to address this issue are to:

- prohibit debt being recovered through a PPM;
- specify alternative arrangements for repayment consumers that are repaying debt through a PPM; or
- regulate exit fees for PPMs.

Monitoring

ESOCSA could monitor the number of consumers switching from a PPM including the number who were repaying debt through their PPM.

10.5 Barriers to switching retailer

There are three barriers to consumers switching retailer:

- consumers in debt may be blocked from switching by the current retailer. This is currently not an issue in South Australia because the current retailer cannot block a retail transfer on the grounds of debt;
- a new retailer may require a consumer to repay outstanding debt from a previous address prior to transfer; and
- in situations where PPMs are not offered by all retailers, consumers with PPMs may be constrained in switching retailer.

Where consumers are able to switch retailer, a further issue arises about when the actual date of transfer should occur. Normally a transfer will occur on the next scheduled read date (or a special meter read); transfers cannot be based on an estimated in South Australia. With a smart card PPM, meter reads might only occur when the consumer swipes their card, but the retailer has little control or knowledge of when this will occur. Special meter reads, and attendant cost, might be required for PPMs to allow switching.

Experiences in other jurisdictions

FRC has been introduced to he electricity market in the UK and New Zealand.

During the 12 months to 31 August 2002, a total of 1.4 million electricity and gas consumers in the UK were blocked from switching to a new supplier on grounds of debt. However, since 1 January 2004 consumers with less than £100 of debt have been able to transfer retailer following the introduction by the regulator of a switching protocol to cover these situations.

PPMs in New Zealand are not used for debt recovery and do not have an emergency credit facility.

Particular issues for specific consumer groups

This issue will affect all consumers who have a PPM and wish to transfer to a different retailer. However those consumers on **low incomes** are more likely to be in debt, which may provide a barrier to those consumers switching retailers. This barrier may be present regardless of the type of metering installed.

Technology

Some technology is interoperable, so that different meter types can share the same vending system. Smart card systems are generally not interoperable but proprietary.

Regulatory options

Regulatory options that may be considered to address this issue are:

- the distributor installs and operates a state-wide PPM system which all retailers may use; and
- requiring a common vending system that may be accessed by all retailers.

Monitoring

ESCOSA could monitor the number of consumers with a PPM that have transferred to a different retailer.

11 Over-arching consumer protection issues

Many of the issues so far discussed have impacts that are limited because they relate to certain types of consumers or because the issue can be dealt with to a greater or lesser extent by technology or regulation.

In this section two major consumer protection issues arising from the use of PPMs are outlined. Both of these issues are linked to a central feature inherent in PPMs, the private nature of consumers handling their electricity costs and any resulting debt and hardship. These two issues are:

- the hidden nature of fuel related poverty under PPMs; and
- the absence of an effective safety net for PPM consumers.

11.1 Hiding fuel related poverty

PPMs serve to hide the extent of severe fuel poverty being experienced by consumers, especially those on low incomes. Under other billing arrangements where there is a relationship between the consumer and the retailer over billing, there are records of hardship and disconnection.

Where a PPM is installed, hardship is hidden, as the rates of disconnection are not necessarily recorded. The lack of data on disconnection is a major flaw in the PPM system from a social policy perspective.

There are two dimensions to this issue. At the individual consumer level, hardship (evidenced by disconnection) for a household in need of immediate aid is hidden. For the pool of PPM consumers as a whole, the aggregate level of hardship resulting from fuel related poverty is not visible. Widespread disconnection rates would be an indication of a flawed system.

Experiences in other jurisdictions

In the UK, as in other jurisdictions, there is no disconnections data generated by the PPM system. Surveys have been used to probe the extent of the hidden hardship. This provides a window into the extent of fuel related poverty:

- just under a quarter of consumers with a prepayment electricity meter self disconnected during the previous year;
- 26 per cent of survey participants admitted that disconnection was due to money problems;
- the highest incidence of disconnection was amongst households with an unemployed member; and

- of those who self disconnected, 42 per cent did so only once, 24 per cent did so three times or more and 4 per cent did so more than 20 times in the previous year.

Particular issues for specific consumer groups

Those on **low incomes** are most likely to be disconnected.

Technology

The smart card PPM technology is capable of providing the retailer with historical information about the operating mode of the meter, that is, normal credit mode, emergency credit mode, load limiting mode or disconnected mode. If this functionality of the smart card could be used it would allow the full impact of disconnection to be gauged.

However it is noted that the smart card technology is the most expensive PPM technology.

Regulatory options and monitoring

Regulatory options to address this issue may include:

- specifying that disconnection data be collected for each consumer with a PPM installed;
- requiring ESCOSA to regularly survey PPM consumers about hardship experienced in relation to PPMs (either disconnection or the consequences of forgoing other essentials in order to purchase electricity credit); and/or
- requiring retailers to provide information to consumers about options in the event of fuel related poverty.

11.2 No safety net built into the PPM system

In the conventional metering and billing arrangements, the relationship between a consumer and retailer is about electricity supply and payment, allowing the consumer to try and negotiate additional time to pay if there are financial problems. This provides one form of safety net for consumers having payment difficulties.

A further safety net can be provided in South Australia through the Emergency Energy Payment Scheme. This can provide a once in a lifetime single payment of $200 to assist with an electricity bill in exceptional circumstances involving a severe household financial crisis such as bereavement, sudden loss of employment or the breakdown of a major electrical appliance. However, eligibility criteria applying to the Emergency Energy Payment make it hard for consumers to access assistance and the ways in which the benefit can be used are restricted. It is not available to consumers who are disconnected, for example.

Where a PPM is installed, there are no safety nets provided after the emergency credit has been used unless load limiting is available. Load limiting is not frequently part of the PPM system and, as in the Missouri situation, is not ongoing. In essence the absence of a real safety net occurs because the relationship between consumer and retailer revolves around meter supply rather than electricity supply. The Emergency Energy Payment Scheme is geared towards other billing arrangements where payment is made retrospectively on a quarterly basis. Even though access to this is restricted by very stringent criteria, and the level of assistance available ($200 as a once off payment) has not been increased for 10 or so years, the Scheme does provide a form of financial assistance to consumers.

Experiences in other jurisdictions

To assist UK consumers in debt, Ofgem requires retailers to submit for its approval a code of practice concerning the payment of electricity bills by all types of domestic consumers, including appropriate guidance for the assistance of consumers who may have difficulty in paying. Though not specific to PPMs, they will technically include PPM consumers. In January 2003 Ofgem provided guidelines for retailers on 'preventing debt and disconnection.' Suppliers have been asked by Ofgem to prepare strategies on debt prevention focussing on a number of areas including:

- using incoming calls to identify consumers in difficulty;
- demonstrating flexibility in debt recovery;
- offering sustainable solutions to consumers in extreme hardship; and
- helping consumers who are unable to manage their own affairs.

Particular issues for specific consumer groups

The group most affected by this issue is those on **low incomes**.

Technology

As discussed in section 11.1 above, smart card technology can identify consumers that have disconnected.

Some PPMs offer load limiting capability.

Regulatory options

Options to address this issue could include:

- a requirement on the retailer to monitor the duration and frequency of disconnections for each consumer and provide the same level of assistance to them in respect of financial hardship as required for consumers with conventional metering;

- a requirement that the retailer address this issue in a PPM Code of Practice, for example, by having a toll free number printed on the meter which consumers can call at any time if they are experiencing problems paying their bills;
- requiring a load limiting facility;
- ensuring that PPM consumers have access to the same level of support as is available under the Emergency Energy Payment Scheme; and
- providing vulnerable consumers with a certain daily allowance of free basic electricity, as is being implemented in South Africa (section C.6.1).

Monitoring

Monitoring could be undertaken of fuel related hardship situations, such as the degree to which the Emergency Energy Payment Scheme is used, utilisation of emergency aid through a welfare agency, or sustained disconnection.

12 Conclusion

12.1 Issues are relative to the consumer context

The discussion in the preceding sections has identified a range of advantages and disadvantages of PPM, drawing on the literature and the experiences with PPMs in Tasmania and South Australia. The combination of the benefits and negative features of PPMs means that PPMs might be regarded as desirable for some consumers but not for others.

In some cases an advantage can also serve as a disadvantage, depending on the individual consumer context. One example is the capacity for PPMs to be used as means of repaying past debt. As has been discussed this can be an advantage to one consumer who is in a financial position to repay debt and where PPMs offer a convenient way to do so with little effort required on their part. For another consumer who may get locked into a debt repayment plan, the impacts may be financial hardship and reduced flexibility to juggle debts in order to meet the most pressing costs of everyday living.

12.2 The role of technology

Different PPM technologies address different consumer concerns but no one technology emerges as a way to address all the issues identified. As a general rule the more expensive technologies are likely to address more issues but will generate the disadvantage of higher costs passed on to consumers. This is an area in which there are also rapid advances and it is likely that developments in the near future may provide the increased functionality required to meet more consumer needs.

12.3 The role of regulation

As with technology, some but not all consumer concerns can be addressed through regulation to protect the consumer. It is noted however that additional regulation will increase the overall cost of PPMs.

12.4 Alternatives to PPMs

In relation to advantages identified, this report has highlighted where there are alternative options currently in existence that may deliver the same benefit as PPMs but without the disadvantages. The ability to pay for electricity in smaller, more frequent amounts stands out as the most important advantage of PPMs. This can be achieved through a range of flexible payment options that can avoid large bills for the consumer.

A Appendix - PPM technologies

Table 3 compares the three types of modern PPM technology (magnetic card, keypad and smart card) according to the following features:

- **payment mechanism** – the method of transferring credit from the point-of-sale into the device controlling the supply of electricity;
- **information transfer** – PPMs allow either the one-way or two-way transfer of information. One-way systems provide information to the meter. Two way systems provide information to the meter as well as providing information from the meter to the retailer;
- **remote meter reading** – some PPMs allow meter readings to occur remotely so that there is no need for a meter reader to visit the premises;
- **interoperability** – some PPM credit transfer systems can be used on various manufacturer's PPMs as long as a vending standard is adopted;
- **remote identification of meter status** – whether a technology is able to inform the retailer of the status history of the meter e.g. whether and when it has been disconnected, operated on limited load, or operated normally; and
- **cost** – the relative costs of the PPM system.

Table 3: Comparison of PPM technologies

	Magnetic card meter	Keypad meter	Smart card meter
Payment mechanism	Via a paper card with a magnetic strip purchased by the consumer at a point of sale. For modern PPMs, these cards are meter-specific.	A coded number is generated when payment is made (via physical outlets, telephone, mobile or the internet) and later entered on to a keypad on the meter.	Via a plastic card with an embedded microprocessor. Transactions to purchase credit must occur at a physical outlet.
Information transfer	One-way. If meter-specific cards are used, then a record of purchases (a proxy for consumption) can be obtained remotely.	One-way. Messages can be printed on the paper vouchers. If meter-specific codes are used, then a record of purchases (a proxy for consumption) can be obtained remotely.	Two-way. The smart card can transfer debt information, tariff information and customised notices to the consumer and meter information to the retailer.
Meter reading	Must be done manually.	Must be done manually.	Can be done remotely. The meter automatically takes a meter reading, either on preset dates or when the consumer swipes their smart card, and readings are taken back to the retailer the next time the consumer swipes their card at a point of sale.
Interoperability	Yes	Yes	No, most smart card systems are proprietary.
Remote identification of meter status	No	No	Yes. When the consumer swipes their card at a point of sale, meter status information is sent to the retailer.

	Magnetic card meter	Keypad meter	Smart card meter
Cost	Low	Low	High
Examples of users	40% of meters in the UK Eskom (South Africa) Electricity Supply Board (Ireland)	Eskom (South Africa) Northern Ireland Electricity	14% of meters in the UK Aurora (Tasmania) EDF (France)
Similar technologies	Rail and bus tickets	Automatic car wash	Public telephone card

The following are features that may be provided with prepayment meters, but are not necessarily unique to any of the technologies described above:

- **information displayed on the meter display** – the level of information available to the consumer differs significantly between different PPMs. Some PPMs can only display non-financial information e.g. remaining energy, whilst others can display a vast array of financial and non-financial information;
- **limiting the timing of disconnection** – some PPMs can be configured to only disconnect at certain times. Other can also be configured to not disconnect on weekends or on public holidays;
- **emergency credit** – some PPMs can be configured to provide emergency credit;
- **load limiting** – some PPMs can be configured to continue to supply a small load once the meter credit has run out, or once the emergency credit has run out;
- **debt collection** - some PPMs can be set to any level of debt recovery. For example, if debt recovery is set at 10 per cent, then when a consumer purchases $100 worth of credit, $10 will go to the payment of past debt and $90 will go to credit for electricity use;
- **historical purchase information** – most PPM technologies allow the retailer to receive historical consumption information;
- **tariff flexibility** – all PPMs can accommodate a fixed daily charge and a single usage tariff while others can accommodate broader tariff combinations, such as a time-of-use tariff;
- **split metering** – some PPMs have a separate meter and display. Where the meter box is located outside, this allows the meter display to be located conveniently inside a residence; and
- **ability to be operated as a credit meter** – some PPM technologies allow the meter to be operated as a normal credit meter, that is, payment is made after the electricity has been consumed.

B Appendix - Benefits of PPMs for retailers

By installing PPMs for consumers, electricity retailers may realise the following benefits:

- improved cash flow – payment is received in advance of electricity usage rather than in arrears, thus bringing the point of cash collection forward. For a consumer previously on quarterly billing, a PPM is estimated to advance the point of cash collection by about three months. This shift in cash receipt reduces the need for the utility to finance working capital to pay suppliers in advance of payment by the consumer. For a typical SA consumer, the value to the retailer of avoiding this working capital is estimated to be about $22 pa; and

- reduced operational costs, including:
  - reduced number of account enquiries as there will no longer be accounts for consumers to query. Such queries are traditionally time consuming and costly;
  - avoiding bad debt and debt collection costs as payment is guaranteed using a PPM. It is estimated that a retailer typically earns a net margin of about $15 on a $250 quarterly bill. Therefore, each unpaid bill will offset the profit earned on about 17 other consumer bills; and
  - avoiding costs of producing and sending accounts, reminders and final notices because consumers will pay for electricity as they use it.

Two-way PPMs may also allow:

- manual meter reading costs to be avoided by providing the retailer with meter readings through the vending system; and
- manual meter checks to be avoided by providing various meter status data to the retailer through the vending system.

C Appendix - Experiences with prepayment meters in other countries

C.1 United Kingdom[44]

C.1.1 Background

Retail competition for domestic and small business consumers was rolled out between September 1998 and May 1999 following its earlier introduction for larger users. Incumbent retailers' in-area prices were subject to price restraints until March 2002. At the time that competition was introduced there were 14 incumbent retailers.

C.1.2 Usage of prepayment meters

The UK has a long history with coin operated electricity meters. However, by the 1970s there were growing problems with coin operated meters including unreliability and frequency of cash stolen from the meters. By 1994 most coin operated meters had been replaced with token meters. In 1991 there were about 1.1 million electricity prepayment consumers. By 1998 there were about 3.7 million electricity prepayment consumers (16 per cent of all electricity consumers).

Since 1998 the number of prepayment meters has remained relatively unchanged. In 2003 there were about 1.5 million magnetic card meters, 1.8 million key meters (these meters are a less sophisticated version of the smart card meter) and 0.5 million smart card meters.[45]

If a consumer does not pay their electricity bills, the retailer can apply to a magistrate's court for a warrant of entry to disconnect the consumer. The consumer is thus effectively given the choice of being disconnected or having a PPM installed and their debt recovered via the PPM. Supplier triggered disconnections have fallen from 48,000 in 1991 to 400 in 1998[46] but calculations based on data from UK consumer surveys[47] suggests that there were more than 1.7 million disconnection events among PPM consumers in 2000.

All PPMs have emergency credit facilities, typically worth £5. Most PPMs are read at least annually – one purpose is for settlement in the wholesale market.

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[44] References to the UK in this document mean England, Wales and Scotland.

[45] Metering International, *Electricity prepayment meters in the UK*, Issue 2, 2003, p3.

[46] Ofgem, *Prepayment meters: A consultation document*, October 1999, p6.

[47] Electricity Association, *Affording Gas and Electricity: Self Disconnection and Rationing by Prepayment and Low Income Credit Consumers and Company Attitudes to Social Action*, March 2001.

Table 4 indicates the main reported reason for obtaining an electricity PPM in 1999 was that it was there when they moved in. It is likely that most of these PPMs were installed because a previous resident had difficulty paying their bills.

Table 4: Reasons for obtaining an electricity PPM[48]

Rank	Reason	Proportion
1	It was there when I moved in	43%
2	I asked for one because I had difficulty paying my bills	24%
3	I asked for one for some other reason[49]	19%
4	The company insisted on installing it because we were in arrears	3%
5	The company insisted on installing it for some other reason	2%

In March 2000 Ofgem published its Social Action Plan, describing the work being undertaken by Ofgem and others to help tackle fuel poverty. The Social Action Plan has a number of measures which Ofgem monitors on a quarterly basis. Those indicators, relevant to electricity PPMs, reported in the September 2003 review were[50]:

- 3.7 million households use electricity PPMs (15 per cent of electricity consumers);
- 1.2 million electricity consumers were repaying a debt, of which 0.5 million were on PPMs;
- 26 per cent of electricity consumers repaying a debt owed more than £100;
- the average debt per consumer was £151;
- 13 per cent of prepayment consumers were in debt;
- the net switching rate for electricity prepayment was 31 per cent compared with an average net switching rate of 37 per cent for electricity consumers [51];
- the number of recorded electricity disconnections for debt was 995 over the previous year;
- 24 per cent of electricity prepayment consumers reported self-disconnection;
- 87 per cent of electricity prepayment consumers were satisfied with their electricity service;
- in the September quarter 71,598 PPMs were installed, of which 40,065 were requested by consumers and 33,650 were installed to recover debt; and

[48] MORI, *Electricity Competition Review; Research Study Conducted for OFFER*, June 1999.

[49] This "other" response in high and may been used in lieu of reason 2 or 4 if the respondent felt embarrassed about declaring details of their situation in a survey.

[50] Ofgem, *Social Action Plan Indicators,* September 2003 quarter.

[51] Prior to 1 January 2004, the current retailer was able to block the transfer of a customer to an alternative retailer on the basis of the consumer's debt with the retailer.

- 26,449 electricity prepayment consumers (0.7 per cent of consumers with PPMs) changed to credit payment.

C.1.3 Consumer issues

A study conducted for Ofgem[52] in 2000 indicated that:

- PPM consumers demonstrated a lower level of switching compared with direct debit consumers;
- almost three quarters of PPM consumers said that they would not return to a credit meter even if it resulted in cheaper fuel bills;
- 35 per cent of electricity PPM consumers had been informed that they could return to a normal credit meter; and
- lower income consumers were far more likely than higher income consumers to have PPMs.

In 2000 a survey[53] was carried out by the UK Electricity Association using a sample of 3,417 predominantly low-income households, 61 per cent of whom used an electricity PPM. The survey examined both electricity and gas prepayment issues. Key findings relating to electricity prepayment were:

- self rationing:
  - 12 per cent of electricity prepayment consumers reported that they could not afford enough fuel and 9 per cent reported that they could not afford to heat their homes properly;
  - the lowest incidence of reporting self-rationing was amongst pensioners;
- self disconnection:
  - just under a quarter of consumers with a prepayment electricity meter self disconnected during the previous year;
  - the predominant reason given for self disconnection was forgetting (47 per cent), followed by money problems (26 per cent) and meter problems (18 per cent);
  - the highest incidence of disconnection was amongst households with an unemployed member and the lowest incidence of self disconnection was amongst pensioners;
  - those who self disconnected had significantly higher self reported annual electricity bills than those who did not self disconnect;

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[52] MORI, *Experience of the Competitive Market: The Domestic Electricity and Gas Markets*, Research Study Conducted for Ofgem, January 2001.

[53] Electricity Association, *Affording Gas and Electricity: Self-Disconnection and Rationing by Prepayment and Low Income Credit Consumers and Company Attitudes to Social Action*, March 2001.

- of those who self disconnected, 42 per cent did so only once, 24 per cent did so three times or more and 4 per cent did so more than 20 times in the previous year;
- 11 per cent of consumers had been without electricity for more than seven hours;

- emergency credit:
  - 92 per cent of electricity PPM users were aware of the emergency credit facility, however only 88 per cent knew how to use it. Both awareness and knowledge were lowest amongst pensioners;
  - nearly three quarters of electricity PPM consumers had used emergency credit in the previous year (85 per cent of those who knew how to use it);
  - the highest usage of emergency credit was amongst households with children and the lowest usage of emergency credit was amongst pensioners;
  - the predominant reasons for using emergency credit was personal reasons (56 per cent), followed by money problems[54](21 per cent) and meter related problems (12 per cent);
- switching to alternative retailers:
  - 10 per cent of electricity PPM consumers had switched electricity supplier compared with 17 per cent for the sample (about the national average at that date);
  - the most common reason for switching electricity supplier is related to money;
  - 5 per cent of electricity PPM consumers reported that they were in arrears with their electricity payments compared with 4 per cent for the overall sample. Reported percentages were much lower than was reported by the supplying companies;
- payment method preferences:
  - 85 per cent of electricity PPM consumers chose prepayment as their preferred method of payment. Seventy-six per cent of electricity PPM consumers with a salary below £17,500 per annum chose prepayment as their preferred method of payment;
  - most prepayment consumers recognised that they paid a premium; and
  - the main reported advantages of PPMs were that prepayment allows for financial control and avoids large bills;
- charging cards:
  - almost three quarters of prepayment consumers charged their cards on a regular weekly basis;
  - some prepayment consumers were using prepayment as a savings bank; and
  - some consumers had requested credit refunds;

[54] These two categories may not be mutually exclusive

C.1.4 Regulatory arrangements

Electricity suppliers are required to have available a range of payment methods which consumers may use. These include payment by cash at reasonable locations, cheque, an agreed amount monthly or quarterly in arrears and, in electricity, by prepayment. Suppliers have to set these payment methods out formally in Codes of Practice following consultation with the relevant consumers' committee.

Fuel poverty, debt and prepayment have become inextricably linked in the UK. The UK Government has set itself the goal to end fuel poverty[55] of vulnerable households as far as reasonably practical by 2010. The following key approaches to achieving this goal recognise the important role that debt plays in fuel poverty:

- **expanding competition in energy supply**[56] – Ofgem has recently expanded competition on a number of fronts:
  - enabling PPM consumers in debt to switch supplier. Up until recently gas and electricity suppliers have been entitled to block consumers in debt from transferring to other suppliers.[57] Ofgem developed a protocol, which came into operating on 1 January 2004, enabling prepayment consumers in debt to switch supplier in an effort to promote competition in this market segment. This protocol provides for consumers in debt of up to £100 who seek to transfer supplier to have their debt re-assigned to the new retailer. The old retailer can invoice the new retailer for 90 per cent of the debt. This provides some incentive for a retailer to acquire consumers with debt. The new retailer recovers the debt through the PPM meter over a specified period;
  - introducing competition in the provision of metering services to promote metering innovation; and
  - educating older people about the savings available by switching supplier. A campaign was launched on TV and includes a leaflet containing advice for older consumers on how to go about changing their supplier and how to deal with doorstep sales people.
- **helping consumers in debt**. Ofgem requires retailers to submit for its approval codes of practice concerning the payment of electricity bills by its domestic consumers, including appropriate guidance for the assistance of consumers who may have difficulty in paying such bills. In January 2003 Ofgem provided guidelines for retailers on 'preventing debt

[55] A household is defined as being fuel poor if, to maintain a satisfactory heating regime, they are required to spend more than 10 per cent of their income on all household fuel use. A satisfactory heating regime has also been defined.

[56] Prior to April 2002 suppliers could not charge more than a £15 surcharge to prepayment PPM consumers. The differential between credit and PPM consumers has remained relatively the same since April 2002.

[57] During the 12 months to 31 August 2002, a total of 1.4 million electricity and gas consumers were blocked from switching to a new supplier on grounds of debt.

and disconnection.' Suppliers have been asked by Ofgem to prepare strategies on debt prevention focussing on the following six key areas:

- minimising billing errors;
- using incoming calls to identify consumers in difficulty;
- using consumer records to target energy efficiency improvements;
- demonstrating flexibility in debt recovery;
- offering sustainable solutions to consumers in extreme hardship; and
- helping consumers who are unable to manage their own affairs.

- **improving access to energy efficiency services**, which is achieved through:
  - the Energy Efficiency Commitment programme which places an energy savings obligation on electricity and gas suppliers to be achieved for the three-year period ending 31 March 2005. Suppliers are required to target at least half of the energy savings of the measures at households that receive income related benefits or tax credits. This means that around £300 million in energy efficiency measures will be targeted at fuel poor households over the current three-year period; and
  - a number of Government energy efficiency programs, with the main program being the Home Energy Efficiency Scheme, now marketed as Warm Front. The scheme provides packages of insulation and heating measures worth up to £2,500 to households and assisted over 500,000 households in the first two years of operation.
- **improving the incomes of vulnerable people**. In addition to a range of social security enhancements recently introduced, the Government also introduced higher Winter Fuel Payments for older people. In the winter of 2000/01 qualifying households each received £200 (double the previous rate). Vulnerable people were also provided with access to Fuel Direct whereby a portion of benefit entitlement is paid direct to the energy supplier on a regular basis for both current consumption and for debt recovery. The system was devised in recognition of the fact that many households find it difficult to budget for their fuel bills.

The debt recovery rate is set at £2.65 per week although this can double if there are existing debts for both gas and electricity. In 2003 about 20,000 electricity consumers were on Fuel Direct.58

Ofgem has also addressed the following specific issues with PPMs:

- Ofgem has worked with suppliers to review the literature sent to PPM consumers on the installation of their meter. This follows research for the EA Fuel Poverty Task Force, which found that one reason for PPM consumers self-disconnecting was a lack of knowledge about the operation of their PPM and in particular the emergency credit

[58] National Energy Action - http://www.nea.org.uk/facts/debtdis.htm

facility. Apart from making consumers aware of the operation of their meters, Ofgem was concerned that information provided by suppliers should include an invitation to call if they find themselves having problems buying credit. Ofgem was also keen that suppliers drew consumers' attention to the fact that energy efficiency advice might help reduce their bills. This initiative has resulted in improvements to the literature provided to consumers by suppliers;

- **standards of performance** - Under the Guaranteed Standards of Performance regulations in electricity, distributors are required to respond to PPM faults within a set timescale - three hours on weekdays and four hours at weekends. Performance under this Standard is monitored. In the year ending March 1999, distributors reported nearly 36,000 PPM faults with 48 incidents reported where the response standard was not met; and
- **code of practice** – each electricity licensee is required to submit to Ofgem for approval a code of practice detailing the services available to consumers wishing to pay by PPM. The code of practice should, amongst other things, detail the retailer's policy on providing emergency credit, dealing with consumers in financial difficulty, the calibration of meters to recover debt and procedures for removal of such meters. The code of practice should also provide information on the operation, advantages and disadvantages of PPMs, and the location and the business hours of vendor outlets (Ofgem expects consumers to be no more than one mile from the nearest outlet).

C.1.5 Monitoring

The Social Action Plan has a number of indicators which Ofgem monitors on a quarterly basis. Information collected for the indicators include:

- different payment methods used;
- average weekly amount towards debt repayment for PPM and non-PPM consumers;
- number of consumers disconnected, reconnected and not yet reconnected for debt;
- average period of disconnection;
- numbers disconnected for theft by PPM and non-PPM consumers;
- length of time that a consumer was disconnected;
- number of PPMs installed per quarter;
- number of PPMs installed per quarter, requested by consumers without a debt;
- number of PPMs installed per quarter to recover debt;
- number of PPM consumers that had changed to credit terms that quarter;
- number of PPM consumers not in debt that had a request for credit terms refused that quarter; and

- number of PPMs installed that quarter where the consumers lived more than 2 miles from a vending point.

Ofgem also monitors the experiences of all consumers through detailed periodic surveys.

C.2 Northern Ireland

C.2.1 Background

Full retail contestability has not been introduced in Northern Ireland. The public electricity supplier, Northern Ireland Electricity ("NIE"), supplies all residential consumers under retail price controls.

C.2.2 Usage of prepayment meters

Between 1990 and 2000, NIE installed approximately 100,000 magnetic card PPMs in Northern Ireland (about 15% of all electricity consumers). A high proportion of consumers who has a PPMs installed were on low incomes, and some PPMs were used for debt recovery.

Based on its experience with PPMs over this period, NIE had concerns over:

- increased operating costs;
- problems with magnetic cards being damaged or lost;
- fraud;
- the inconvenient location of meters outside; and
- insufficient vending outlets.

Therefore, in the lead up to setting the 2002 price controls, NIE and the Regulator agreed on a package of retail measures, which included rolling out a low-cost keypad PPM system to 100,000 existing PPM consumers, and not charging them any more than a standard credit consumer. PPM consumers had previously paid a surcharge of £18 per year on the normal standard credit tariff. From 1 April 2003, PPM consumers have received a 2.5% discount on the standard credit tariff.

The advantages of the selected keypad PPM over the previous technology was:

- ability to carry out transactions over the telephone;
- consumers who lost their key number could retrieve it again over the phone;
- the ability to limit the timing of disconnection;
- comprehensive financial information provided by the meter;

- the ability to locate the display unit inside the house, separate from the meter; and
- the ability to use the meter for multiple tariff blocks.

NIE reads the PPMs once every two years.

In February 2003, NIE proposed rolling out a further 75,000 keypad PPMs, and the Regulator proposed that a time-of-use trial be conducted with the keypad PPMs.[59] From September 2003, NIE has been providing keypad PPMs to consumers with separately metered off-peak loads (Economy 7 tariff). NIE has been working with their keypad manufacturer to introduce a special PPM for disabled or partially sighted consumers, but to date no acceptable meter has been developed.

The PPM scheme is called Home Energy Direct. The keypad PPMs are set so that consumers cannot be disconnected between 4pm and 8am, on weekends and on public holidays. £1 (approximately one day) of emergency credit is provided.

Not all vulnerable consumers use PPMs. A scheme called Fuel Direct allows claimants on income support who are in debt, to make payments directly from their benefits. Fuel Direct is used by consumers for whom a prepayment meter is not a practical option and is similar to the Centrepay scheme available in Australia. It takes away the link between usage and payment.

C.2.3 Consumer issues

Research undertaken by NIE indicates that 90% of keypad PPM consumers find the PPMs convenient and easy to use.

The keypad PPM was intended to replace existing PPMs, which were of dated technology. However, recently about one in three keypad PPM installations have been installed as a result of requests from consumers previously not using a PPM.[60]

C.3 Ireland

C.3.1 Background

The Electricity Supply Board currently supplies all residential consumers in Ireland. Full retail contestability is planned to commence in February 2005 in Ireland.

[59] Office for the Regulation of Electricity and Gas, *Extending the Supply Price Control / Preparing for effective domestic supply competition*, A consultation paper, 13 February 2003.
[60] Office for the Regulation of Electricity and Gas, *Social Action Plans – A Review*, August 2003.

C.3.2 Usage of prepayment meters[61]

There are approximately 24,000 residential consumers – about 1.8% of the market - using PPMs. Almost all PPMs were installed from 1990 and generally introduced in situations where the consumer was having payment difficulties. These token meters use magnetic cards that are purchased at certain retail outlets. A small number of landlords have installed privately owned PPMs.

There are no net operational savings from the token PPMs and there is no additional charge on consumers for having a PPM. PPM consumers are cross-subsidised by other consumers through distribution charges. They are therefore not available as a payment choice for consumers in general.

C.3.3 Regulatory arrangements

Prepayments meters are currently unregulated, except that a standardised domestic tariff also applies to prepayment consumers.

The Commission for Energy Regulation is considering introducing the following regulations:

- a requirements for all PPM systems to conform to one standardised pre-specified technology;
- meters should be configured not to disconnect at night, weekends or other times depending on the opening hours of vendors/suppliers/financial institutions;
- the load of a consumer who has run out of credit during times when disconnection may not occur should be limited;
- call outs should be limited to normal working hours to reduce operational costs;
- a common code of practice for the introduction of PPMs in cases of debt. This may include offering payment restructuring plans, involving outside agencies, and distinguishing consumers in financial difficulty from those in default.

C.4 France

C.4.1 Background

Electricité de France (EDF) supplies all domestic consumers. About 10% of the population lives in poverty. Consumers have a right to utility services and there is a subsidised "social tariff". EDF has a goal of no disconnections, and uses a subsidised tariff, load limitations and PPMs to deal with consumers with payment difficulties.

[61] Commission for Energy Regulation, *Prepayment Meters: A Consultation Paper*, 12 December 2003.

C.4.2 Usage of prepayment meters

Some time ago EDF purchased about 36,000 PPMs. 25,000 were installed in two areas where consumers were having payment difficulties. The rest were installed in a large number of towns mostly as a trial. In 2001 EDF issued a tender for a large volume PPM system. However, the deployment of that project has not started.

C.5 Czech republic

C.5.1 Background

The Czech electricity industry is currently in the process of being privatised. This has meant that for the moment, PPMs are of low priority.

C.5.2 Usage of prepayment meters

About 600 residential consumers have PPMs. These were installed due to payment difficulties and have been set to recover past debt. These consumers find it easier to pay in smaller increments.

C.5.3 Consumer issues

Consumer response has been mostly positive because of the benefits of:

- improved management of cash flow; and
- better planning and rationing of their electricity usage.

C.6 South Africa

C.6.1 Background

By 1988 only about 35% of South African homes were electrified. In 1988 Eskom, the national electricity utility, adopted the "Electricity for All" concept. At the time, most domestic electricity consumers were supplied by municipalities, but most of the households that have been subsequently electrified were supplied directly by Eskom. Since 1990, about 4 million homes have been electrified (there are about 11 million homes in South Africa).

Recently a policy decision was taken to provide 50 kWh per month of free electricity to poor South African households. On average 56% of households consume more than 50 kWh per month of electricity. This policy is being implemented on a phased basis.

C.6.2 Usage of prepayment meters

It was decided that the most cost-effective means of achieving electrification was to install PPMs in conjunction with the electrification project. PPMs were selected because:

- there was a culture of non-payment for services in many of the unelectrified areas and many consumers were also not in a position to budget for electricity;
- many consumers were illiterate and would not be able to read their bills and might not understand that they needed to pay for electricity only after the electricity had been consumed;
- gaining safe access for meter reads could be problematic;
- the system had to operate with a low level of management and maintenance. The standard billed system required too much manpower to process accounts and maintain connections and disconnections; and
- many of the areas to be electrified had almost no infrastructure. There were no fixed addresses for consumers, most did not have bank accounts and there were no postal services in those areas.

In 1989 the first Eskom contracts for a total of 10,000 PPMs from two manufacturers were secured. The contracts were increased to a total of 20,000 meters in 1991 with a third manufacturer included. The total contract was steadily increased to 300,000 PPMs per year from 1994 until 2000.[62] Municipalities also installed additional PPMs over this period. There are currently over 4 million PPMs installed in South Africa.

By 2000, PPM prices had fallen to almost a quarter of the cost of the early PPM models.[63]

During the early 1990s Eskom embarked on a programme to standardise PPMs and the vending process. To enable the new vending system to transfer credit to all types of PPMs it was also necessary to develop a standard transfer medium and protocol. Therefore, in the mid 1990s, Eskom developed a standardised prepayment system called the Standard Transfer Specification System (STS) which has been since adapted.

A token is purchased from a vending machine, taken home by the consumer and entered into their PPM. If the token is valid the PPM accepts the token and adds the credit to the credit currently in the PPM. Eskom uses two types of token technologies:

- disposable magnetic paper cards; and
- numeric tokens which is a 20 digit number, normally printed on a slip of paper. The consumer enters the number into the PPM via a keypad on the meter.

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[62] www.eskom.co.za

[63] Roland Hill, *Prepayment Poverty and Wealth Tariffs*, paper presented to the South African Revenue Protection Association, 2000.

A token can only be entered once and is issued for use in a unique prepayment meter. Vending machines are connected to central IT systems to allow consumption information to be transferred to Eskom.

Most PPMs have been installed on a "Readyboard" which consists a PPM, a double electric plug outlet, breaker switches and earth leakage protection. The meter has a flashing light showing the rate of consumption of electricity.

Eskom charges PPM consumers a flat single tariff.

Modifications have been made to vending software to accommodate free basic electricity.

There is evidence that some municipalities are:

- integrating payment for electricity and other utilities into one prepayment system;
- removing the meter and disconnecting consumers that are found to be tampering with meters.[64] These consumers are charged a significant reconnection fee which must be paid before they are reconnected; and
- applying a fixed-percentage surcharge on electricity sales to recover payment arrears for other services.

C.6.3 Consumer issues

Consumers receiving PPMs have had no choice. However, there has been no evidence of resistance to PPMs, perhaps because:

- everyone has them. Most people are likely to be unaware that there are alternative metering technologies;
- they appear to be the only practical option for electricity supply to poor areas;
- PPMs are associated with the provision of electricity, which is a major benefit to consumers; and
- politically electrification, with which PPMs are associated, is regarded as a major success.

There has been some resistance to the use of PPMs to collect debt or payment for other services.

[64] Tamper rates of 13-27% have been reported in two surveys in recent years.

C.6.4 Regulatory arrangements

PPM tampering was a serious problem that emerged in the 1990s. This, together with other payment problems, resulted in the electricity industry forming the South African Revenue Protection Association (SARPA) in 1996. SARPA has since evolved and succeeded to direct revenue protection activities beyond the realms of technical tamper prevention to the multi-disciplinary issues of community participation, credit control practices and the promulgation of regulatory and legal frameworks spanning all municipal services.

C.7 New Zealand

C.7.1 Background

New Zealand was one of the first countries to introduce full retail competition (i.e. down to the domestic consumer level) in its electricity industry. Retail competition down to the level of the domestic consumer has been permitted since April 1993. In practice, however, very few domestic consumers took the opportunity to switch retailers because it typically required the use of an interval meter. In April 1999 deemed profiling was introduced along with a switching protocol. The introduction of profiling resulted in electricity retail competition becoming more widespread.

A ministerial inquiry into the electricity industry during 2000 states that:

> *"Prepayment metering offers retailers the advantages of assured payment and reduced financing and collection costs. An alternative to prepayment meters would be to impose a strong obligation to supply on retailers. Universal service obligations are common in other countries and some apply in some sectors in New Zealand. An obligation to supply electricity would significantly diminish incentives on customers to pay their electricity bills, increasing collection costs and the incidence of bad debts. We believe pre-payment meters are a better option and retailers should be obliged to offer them."* [65]

Accordingly, the Government Policy Statement released in February 2002 requires the development of rules to ensure that all retailers serving more than 25% of the market for domestic consumers in a line network area must offer PPMs to domestic consumers at reasonable cost.

Officials of the Ministry of Economic Development have indicated that the primary government objective in relation to PPMs is to minimise incidences of electricity supply being made unavailable to consumers, either due to payment default or a poor payment history. Therefore, the Maria Metering and Reconciliation Working Group has interpreted

[65] Ministry of Economic Development, *Inquiry into the Electricity Industry*, Report to the Minister of Energy, June 2001, clause 233.

the purpose of the Government Policy Statement requiring PPMs to be offered as to help consumers manage their household finances. This is to avoid electricity disconnection for non-payment and to ensure that a poor payment history does not prevent a consumer from finding an electricity supplier.[66]

C.7.2 Usage of prepayment meters

In 1999 it was estimated that fewer than 50,000 PPMs had been installed in New Zealand (there are about 1.4 million residential electricity consumers in New Zealand).[67] Schlumberger[68] estimates that 35,000 prepayment meters are currently installed in New Zealand.

Most PPMs were installed prior to deregulation and many were provided to consumers with credit problems. The 2000 Electricity Industry Inquiry reported that retail companies appear to be withdrawing their PPMs, although no reason for this trend was given.

A number of different PPM technologies have been adopted in New Zealand. Some require manual meter readings for the wholesale market (one-way meters), while others do not (two-way meters). Recent consolidation in the retail sector has resulted in a number of retailers reporting that they are trying to rationalise the number of different prepayment systems in use and replace aging prepayment systems. It is reported that at least four large retailers in New Zealand are using the CIC prepayment system (Meridian Energy purchased the New Zealand operations of CIC Global in May 2003 and has renamed it Arc Innovations).[69]

Other features of PPMs in New Zealand are:

- consumers are usually charged a fee for the installation of the PPM, and are usually also charged a fee for the removal of a PPM;
- most meters have not been set to provide emergency credit; and
- it is likely that only a few meters are currently recovering debt.

C.7.3 Consumer issues

Differing views have been expressed on whether PPMs are stigmatised in Nez Zealand. In general, there does not appear to be a strong consumer demand for PPMs. One reason for this is that PPMs have not been strongly promoted by retailers (Christchurch is an

[66] MARIA Governance Board, *Prepayment meters and the GPS*, 17 April 2003, p21.

[67] Metering International, *Prepayment around the world*, Issue 2, 1999.

[68] Gavin van Tonder, Schlumberger, Personal Communication, 23 February 2004.

[69] Mel Orange, Meridian Energy, Personal Communication, 25 February 2004.

exception).[70] Despite the Government requirement that PPMs must be offered, many consumers are unlikely to even know that a prepayment metering option even exists.

The Consumer Institute[71] was of the opinion that:

- PPMs are not seen to be a significant issue by electricity consumers;
- there is no evidence of significant consumer demand for PPMs;
- the likely reason for the lack of significant consumer demand is that there is a cost for installing a PPM and the tariffs for PPMs are higher;
- there are no records of the incidence of self-disconnection by PPM consumers;
- PPMs were largely initially installed for poor credit consumers; and
- emergency credit is not being provided.

The Maria Governing Board identified the following potential consumer issues with PPMs:[72]

- daily fixed charges apply to some PPM consumers. If a consumer self-disconnects, their daily charge debt will accumulate and they will only be reconnected once all daily charge debt accrued in the PPM is either paid or cancelled. Also, deduction of fixed daily charges may result in a self-disconnection occurring while the consumer holiday leading to issues such as the freezer thawing;
- where prepayment meters are mounted outside in a meter box, recharging the meter at night or viewing the remaining credit can be difficult;
- increased difficulty and potential cost for PPM consumers who wish to switch retailer;
- the cost of electricity delivered under a PPM metering option is generally higher to the consumer than traditional tariffs.

C.7.4 Regulatory arrangements

The New Zealand electricity industry has been largely self-regulating:

- currently electricity consumer protection is largely carried out via the Electricity Complaints Commissioner Scheme, which provides a dispute resolution service and oversees its Electricity Consumer Code of Practice. The Scheme is funded by member companies, but remains independent of the industry in its investigation processes and decision-making; and
- MARIA is a voluntary agreement designed for the purpose of encouraging and enabling competition in the supply of electricity at the wholesale and retail levels in New Zealand.

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[70] Robert Reilly, Electricity Commission, Personal Communication, 25 February 2004.

[71] Paul Doocey, Consumer Institute, Personal Communication, 24 February 2004.

[72] MARIA Governance Board, *Prepayment meters and the GPS*, 17 April 2003, p9.

However, due to a lack of industry consensus, the Government recently decided to appoint an Electricity Commission, which will be the chief regulatory agency for New Zealand's electricity industry. The Electricity Commission will take over responsibility for regulation from 1 March 2004.

The Maria Governing Board previously expressed a concern that the Government's requirement for PPMs to be offered might substantially lessen competition because offering PPMs at reasonable cost is likely to result in retailers effectively cross-subsidising PPMs. This would act as a disincentive for retailers to gain market share above 25%. The Board recommended that the Government Policy Statement be amended to a requirement that all retailers offer solutions to help consumers manage their household finances so as to avoid electricity disconnection for non-payment, and to ensure that a poor payment history does not prevent a consumer from finding an electricity supplier. Therefore, each retailer could decide whether PPMs were the most cost-effective solution to achieve this outcome.[73]

It has been concluded that the Maria rules do not preclude the use of PPMs, except for the following outstanding issues:[74]

- the collection and submission of metering information for reconciliation;
- switching timeframes for prepayment meters; and
- switching when a PPM has been configured to recover debt.

C.8 Tasmania

C.8.1 Background

Aurora supplies all residential consumers in Tasmania. Residential electricity consumers are not contestable and the Tasmanian Government has made no firm commitment to a commencement date for full retail contestability. The Office of the Tasmanian Energy Regulatory (OTER) regulates electricity supply.

C.8.2 Usage of prepayment meters

After an initial trial, a smart card based PPM system, Aurora PAY AS YOU GO (APAYG), was initiated in 1997. Today, approximately 28,000 consumers (14% of the residential consumer base) use prepayment meters. Aurora has set itself a stretch target aiming to extend APAYG to 25% of its consumer base by 2007.[75]

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[73] MARIA Governance Board, *Prepayment meters and the GPS*, 17 April 2003, pp8,28.

[74] MARIA, *Progress Report on GPS Issues*, Letter to the Minister, 10 May 2002.

[75] Aurora Energy, Annual Report, 2002-2003.

Aurora has been marketing APAYG as a product of choice. Aurora reports that the product has not been targeted at any specific consumer group[76] and OTER[77] and the Electricity Ombudsman[78] report that nothing has come to their attention which suggests otherwise.

APAYG consumers are charged on a time-of-use tariff, which includes a daily fixed charge. Pensioner discounts apply.

Table 5 compares APAYG with the standard tariff, for a standard consumer, and indicates the difficulty of comparing the two tariffs when making a decision on whether to transfer to transfer to APAYG. Additional APAYG and standard tariffs apply to Off Peak and HydroHeat consumers.

For both APAYG and the standard tariff, there is a reduced fixed charge for consumers eligible for a concession.

Table 5: Comparison of the APAYG and standard tariff for a standard consumer

Pay as You Go					**Standard tariff**	
Summer	6.30am – 11am	11am - 4.30pm	4.30pm – 10.30pm	10.30pm – 6.30am	First 500 KWh	14.193 c/kWh
Mon-Fri	13.73 c/kWh	10.68 c/kWh	13.73 c/kWh	6.22 c/kWh	Next 1000 kWh	12.244 c/kWh
Sat-Sun	10.68 c/kWh	10.68 c/kWh	10.68 c/kWh	6.22 c/kWh	>1,500 kWh	8.998 c/kWh
Winter	6.30am – 11am	11am- 4pm	4pm – 8pm	8pm – 6.30am	Fixed charge	61.355 c/day
Mon-Fri	13.73 c/kWh	10.68 c/kWh	8.45 c/kWh	6.22 c/kWh		
Sat-Sun	10.68 c/kWh	8.45 c/kWh	8.45 c/kWh	6.22 c/kWh		
Fixed charge	81.81 c/day					

The two-way smart card APAYG system that is used in Tasmania allows Aurora to receive information on consumption, daily profiles and money transactions. Consumers can obtain a consumption history on request from Aurora.

However, this system has less functionality than the two-way smart card system that Ezikey (a wholly owned subsidiary of Aurora) is promoting for mainland Australia. Examples of additional features of the Ezikey system are:

[76] Darren Hill, Retail Regulatory Manager, Aurora Energy, Personal Communication, 24 February 2004.

[77] Heather Cerutty, Office of the Tasmanian Electricity Regulator, Personal Communication, 2 March 2004.

[78] Stuart Wright, Electricity Ombudsman, Personal Communication, 1 March 2004.

- it can readily identify consumers who are disconnected, and therefore identify consumers that might be in financial difficulty (these consumers can then be counselled to see if APAYG is a suitable option for them);
- it has Load Limiting capability which means that a consumer need not be disconnected from electricity supply, even if they have run out of credit and emergency credit on their meter. Once emergency credit runs out, the load can be limited to run essential appliances;
- consumers moving house can simply download credit from the PPM onto their smart card and get a refund for the credit that was left on the meter at a vending point; and
- outstanding debt can be recovered through a fixed charge deduction at the meter, a weekly amount to be repaid being negotiated with the individual consumer.

Consumers pay an upfront cost of $50 to convert to APAYG. Consumers can revert back to the standard regulated tariff at no cost during an initial 3-month cooling off period or within 28 days of notification of the adjustment of the APAYG tariff. Otherwise consumers pay about $50 for converting back to the standard regulated tariff. Any consumer that moves house is required to pay a $50 connection fee. If a consumer moves into a house with a PPM, then they have the option of paying half the standard connection fee to stay on APAYG, or paying the standard connection fee to move onto the standard regulated tariff. Consumers moving house need to send their smart card to Aurora and either have a cheque sent to them for the remaining credit or get the amount credited to their new account or to their new APAYG meter.

PPMs are usually located wherever the previous meter box was located, unless the meter box is not readily accessible. The majority of meter boxes are located outside.

The meter informs an APAYG consumer when their credit reaches $3, and they then have the option to press a red button and activate $5 of emergency credit. Once the emergency credit runs out, or the consumer's credit runs out and they do not elect to activate the emergency credit, they will be disconnected, but only between 8 am and 8 pm (9am to 9pm during summer months). Once disconnected, the consumer will only be reconnected following purchase of additional credit. However, if a consumer is disconnected and emergency credit has not yet been activated, they can reactivate the meter simply by pressing the red button. Once disconnected, the meter will continue to accumulate debt from fixed charges.

To be eligible for APAYG, consumers must have no outstanding electricity debt. However, Aurora introduced a pilot program service called APAYG Progress Rate between 2001 and April 2003, which enabled consumers' outstanding accounts to be recovered via the APAYG system. For every kWh consumed, the consumer paid 1.5c towards their debt. Aurora has proposed changes to OTER to allow consumers with outstanding accounts to transfer to APAYG.

C.8.3 Consumer experiences

APAYG consumers make approximately 35 purchases per year on average, while less than 3 per cent of APAYG consumers purchase less frequently than once every four weeks.[79] This indicates that some consumers prefer spending in smaller increments, possibly because its helps budgeting.

The Electricity Ombudsman has indicated that they have generally only received a handful of APAYG complaints each year. The themes of these complaints have been:[80]

- delays in getting connected to APAYG;
- people in debt wanting to transfer to APAYG; and
- APAYG not being available in their area.

All these complaints relate to getting connected to APAYG, supporting the view that there is strong consumer demand. No complaints have been received in relation to consumer coercion.

A survey carried out by Aurora indicated that 94 per cent of APAYG consumers were satisfied with APAYG and 2 per cent were dissatisfied.

Aurora reports that the primary reasons why people select APAYG are:

- they do not like receiving large and uncertain bills on a quarterly basis, and APAYG allows them to pay for electricity in smaller increments; and
- APAYG provides them with some control over how much they spend on electricity.

Aurora reports that take up of APAYG has not been concentrated in any particular residential market segment or in any particular income group, and neither has APAYG been adopted by on-sellers of electricity, for example in caravan parks.[81]

Aurora reports that less than 2 per cent of APAYG consumers who originally chose APAYG have requested to be moved off APAYG.

C.8.4 Regulatory arrangements

OTER decided not to declare APAYG as a price regulated service because:

- the APAYG offering is distinguished from the standard tariffs by:
  - the time-of-use pricing structure;

[79] Ezikey response to the NSW proposed Market Operations Rule for prepayment meters, March 2003.
[80] Stuart Wright, Electricity Ombudsman, Personal Communication, 1 March 2004.
[81] Darren Hill, Retail Regulatory Manager, Aurora Energy, Personal Communication, 24 February 2004.

  - the billing system; and
  - the service.
- it is substitutable for any ordinary tariff that forms part of the safety net;
- there exists a safety net tariff in the forms of the standard tariff offering with maximum prices and minimum service standards;
- consumers are not obliged to adopt APAYG and can revert to the standard tariff (without penalty in the first three months) if they choose; and
- future product enhancement and innovation would be encouraged by not regulating such products.

Although APAYG prices are not regulated, other aspects of the service are. However, to date OTER has only monitored APAYG at a high level. This monitoring has involved receiving quarterly reports on APAYG customer numbers and holding discussions with welfare agencies and the Electricity Ombudsman on APAYG.

OTER recently commenced an inquiry into APAYG, with the key objective of considering the prices, terms and conditions of APAYG, the extent to which APAYG is a genuine "product of choice" for residential consumers, the interaction of APAYG and Aurora's credit policy, and the extent to which regulation of APAYG may be necessary to protect the interests of consumers.

C.9 New South Wales

C.9.1 Background

In February 2003 the Ministry of Energy and Utilities prepared a draft Market Operations Rule to provide a regulatory framework in the event of the introduction by retailers of electricity PPMs. A number of submissions were received in response to the draft Market Operations Rule.

The stated intention of the Ministry of Energy Utilities in February 2003 was to finalise the Market Operations Rule (Prepayment Meters) in May 2003. However, there is no evidence of the rule being finalised.

C.9.2 The draft Market Operations Rule (Prepayment Metering)[82]

Key proposed requirements are:

[82] Ministry of Energy and Utilities, *Proposed Market Operations Rule on Prepayment Metering – A Consultation Paper*, February 2003.

- electricity PPMs will only be permitted as part of a negotiated consumer supply contract for small retail consumers. For a PPM to be installed at a consumer's premises, the consumer must agree to the terms of the relevant negotiated supply contract governing the use of PPMs. No consumer who wishes to be supplied through a conventional meter will be forced to adopt a PPM;
- tariff rates for PPM consumers will not be regulated;
- the use of PPMs will be prohibited for consumers on life support systems;
- self-disconnection of supply will be prohibited on weekends and public holidays;
- emergency credit of at least $25 (approximately 12 days' worth of supply for the average residential consumer) must be provided;
- retailers will not be required to provide bills to PPM consumers. However PPM consumers must have ready access to at least the following information:
  - their account balance;
  - whether the PPM is operating on reserve credit;
  - all relevant rates including the timeslots for each rate; and
  - consumption (in kWh and dollar amounts) since the last payment and for the last 12 months.
- the retailer must ensure that the consumer receives the same energy concessions they would enjoy under conventional metering;
- consumers should not be charged a transaction fee for the service at a point of sale outlet; and
- consumers should have sufficient outlets to pay for their electricity.

C.9.3 Consumer responses to the draft Market operations Rule (Prepayment Metering)

Uniting Care (NSW/ACT) submitted that:

- it is difficult to see the business case for PPMs except in the case of consumers with poor payment histories;
- PPMs should only be an option if other payment options are also available e.g. use of Centrepay;
- disconnection for low income consumers can be inherently dangerous because the use of alternatives, such as candles or poorly maintained kerosene heaters, can lead to house fires;
- load limiting should not be allowed;
- consumers should not pay for a PPM to be removed;

- PPM consumers should have proper access to the Energy Accounts Payment Assistance (EAPA) voucher scheme; and
- the issue of tenants needs to be addressed.

The Park and Village Service (NSW) was concerned that:

- park residents will have little choice because the park owner will coerce them into accepting PPMs when it suits the owners' interests;
- PPMs are too expensive and the cost will be borne by park residents;
- retailers should be required to continue to provide regular detailed records of consumption and all charges by post;
- park owners should honour EAPA vouchers;
- no one will monitor tariffs to ensure they are correct; and
- park residents will in reality only have access to one point of sale and that will be solely the park office.

The Australian Consumer's Association believed:

- a negotiated contract means that consumers are at risk of PPM contracts skewed against their interest;
- consumers may be coerced into accepting PPMs;
- the terms for reversion to conventional metering could be onerous or unfair;
- there are practical issues with the definition of a life support system;
- disconnection should be limited to weekdays, but not Public Holidays;
- load limiting should be mandated for PPMs so consumers always have a minimal level of access to electricity;
- there is a concern that PPMs could be used for the collection of past debt or payment for other goods and services;
- there should be a cooling off period during which the PPM can be removed at no cost. If a contract was deemed unfair or sold in a coercive way, the installation charges should also be refunded; and
- a cap should be placed on de-installation fees, by reference to real costs, so that consumers have an effective choice to move off PPMs.

The Council of the Aging (NSW) was of the view that:

- a trial in metropolitan and rural areas should be completed and evaluated before a regulatory framework is set up;

- meters should only be available where the relationship between user and supplier is direct and not through a third party;
- further economic analysis is required to decide who should pay for the meter;
- a buy-back scheme may be appropriate for unwanted meters;
- consumers should be protected from retailers introducing new technology and thereby forcing obsolete meters to be replaced at cost to the consumer;
- the regulations need to build in protections to ensure freedom of choice, such as no incentives to be offered to change over to PPMs, a cooling off period, regulated tariffs, and PPMs to be offered in conjunction with other payment schemes;
- retailers should be required to provide certain information, such as where points of sale are in their local area, procedures for purchasing electricity, what information the PPM can provide and how to obtain information from the PPM;
- retailers should be required to assess whether a consumer is physically and intellectually able to operate a PPM;
- PPMs should:
  - allow credits to be immediately withdrawn from the meter;
  - indicate when credit is low;
  - have an easy to read visual display;
  - provide a certain level of power when credit has expired;
  - have a certain amount of emergency credit;
  - be able to provide a different credit limit to different consumers;
  - allow credit to be provided via an input code as well as a smart card; and
  - have no expiry date for use of credit.

The Energy Action Group, Victorian Council of Social Service, Financial and Consumer Rights Council, St Vincent de Paul (Victoria) jointly submitted that:

- PPMs should not be allowed since they do not address fuel poverty and affordability issues;
- PPMs hide the level of disconnection, permit the utility to bypass existing disconnection procedures, provide a cheap method of debt recovery, permit a formally segmented market, reduce operating costs and improve cash flow;
- PPMs are the most expensive payment method, yet used by consumers with the greatest affordability problems; and
- PPMs are unlikely to ever be truly voluntary because consumers can be induced to 'choose'.

The Office of Fair Trading believed that:

- effective protection from coercion is the most important consumer protection issue:
- recovering past debt via the PPM should be prohibited, or capped, to help prevent coercion;
- exempt retailers (e.g. caravan park owners) should be prohibited from installing PPMs with their tenants;
- if a consumer wants to remove their PPM, it should be done within 10 days; and
- energy concession entitlements and access should not change with PPMs.

The Energy and Water Ombudsman NSW was of the view that:

- PPMs should not be targeted to low income consumers or to any other specific group of consumers;
- the same protections on disconnection times and procedures for standard consumers should apply to PPM consumers; and
- consumers should be provided with full information about costs to assist them to make an informed choice about PPMs.

The Public Interest Advocacy Centre and the Combined Pensioners and Superannuants Association of New South Wales submitted that:

- there is a major concern about coercion. This concern could be addressed if PPMs were not allowed to collect past debt;
- there is a need for regulated PPM tariffs;
- PPMs should not be used to recover other costs, for example, a solar hot water system; and
- there should be no exit fee for PPMs as this will influence people's choices if they want to revert back to credit metering.

The Council of Social Service of New South Wales believed that:

- retailers should only be permitted to offer PPMs if they are making a range of other payment methods available. These should include prepayment through instalments, and bill smoothing measures, as well as CentrePay;
- when informing consumers about PPMs, retailers should be required to provide information on the full range of other available payment options;
- retailers may encourage consumers in debt to convert to PPMs. This can be discouraged by not allowing PPMs to recover past debt and by regulating the incentives that retailers can offer consumers, particularly those in debt, to convert to PPMs;

- PPM tariffs should be regulated because there are concerns that PPM tariffs would otherwise be expensive;
- the cost of removal of a PPM should be regulated because it has the capacity to eliminate consumer choice;
- a range of protections against disconnection is required;
- the current regulations preventing park and village operators from supplying electricity for greater than the regulated tariff should be maintained;
- landlords and boarding house operators should be prevented from recovering the cost of removal of PPMs from tenants and lodgers. Tenants and lodgers should not have their choice about means of supply restricted.

The Older Persons Tenants Service was of the view that:

- other forms of prepayment should be available;
- PPMs should not be used to recover past debts;
- incentives should not be offered as an inducement to install a PPM;
- the cost of reverting to a standard tariff should be regulated;
- 20 days is too long a period to effect request of change to the standard tariff;
- consumers should be informed in plain English of the comparative costs of a PPM tariff to a standard tariff;
- consumers should still receive quarterly documentation;
- the full range of protections against disconnections should be supported; and
- material (including contracts) must be friendly for older persons.

D Appendix - Responsibility for prepayment metering services

There are a number of areas of responsibility for metering services, each of which may have a material impact on costs:

- responsibility for the provision and operation of the meters;
- responsibility for the provision and operation of the vending system; and
- responsibility for meter data provision.

Provision and operation of meters

There are two broad options for the provision and operation of meters:

- each retailer is responsible for its provision and operation of its own meters. Advantages of this approach are that it would provide incentives for retailers to minimise costs and to innovate. Disadvantages of this approach are that economies of scale might be lost unless the retailer were using the same PPMs in other jurisdictions, and retailers could potentially lock consumers into their PPM systems due to entry and exit fees associated with moving to another retailer or because the PPM system is not supported by other retailers; or
- the distributor is responsible for the state-wide provision and operation of PPMs. Advantages of this approach are that it would provide economies of scale, there would be uniform service standards, there would be minimal cost for PPM consumers to switch retailer and the distributor currently has this role. Disadvantages are that the distributor/agent would have little incentive to minimise costs or to innovate, retailers would have no choice, or restricted choice over PPM technologies, a mechanism to recover these costs from the distributor would need to be developed, and it would increase the regulatory burden on ESCOSA and the distributor.

A review of the metrology arrangements in the National Electricity Market is currently being undertaken jointly by the regulators in South Australia, Victoria, New South Wales, the ACT, Queensland and Tasmania. As part of this review, the regulators are considering whether the metering services for PPM should be competitive or provided exclusively by the distributor.

Provision and operation of the vending system

There are two broad options for the provision and operation of the vending system:

- each retailer is responsible for its vending system. Advantages of this approach are that it would provide incentives for retailers to minimise costs and to innovate. Disadvantages of this approach are that vending systems might be duplicated, economies of scale lost, and retailers could potentially lock consumers into their PPM systems due to entry and exit fees associated with moving to another PPM retailer; and

- the distributor, or a central agent, is responsible for the state-wide provision and operation of a vending system. Advantages of this approach are that it would provide economies of scale, there would be uniform service standards and there would be minimal cost for PPM consumers to switch retailer. Disadvantages are that the distributor/agent would have little incentive to minimise costs or to innovate, retailers would have no, or restricted, choice over prepayment mechanisms, a mechanism to recover these costs from the distributor would need to be developed, and it would increase the regulatory burden on ESCOSA and the distributor/agent.

Responsibility for meter data provision

The distributor requires metering data for the billing of network charges and NEMMCO requires metering data for determining settlement amounts in the wholesale market. Responsibility for data provision would depend on the decision about who would have responsibility for operating the PPM system. If it were the distributor, then there should be no issue, because the distributor currently has the responsibility for metering data provision. If it were the retailer, then the retailer would be required to provide this information to the distributor and NEMMCO in accordance with the Metrology Procedure.