

**Smart Meter Customer Protection and Safety Review –  
Draft Policy Paper One**

**Ministerial Council on Energy Standing Committee of  
Officials**

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# 1. Introduction

In December 2007 the Ministerial Council on Energy (MCE) committed to work with stakeholders and the appropriate jurisdictional authorities to review customer protection and safety arrangements and ensure they remain appropriate where smart meters are rolled out. The MCE Standing Committee of Officials (SCO) has been tasked with undertaking this review, of which this Draft Policy Paper is the first part. A second Draft Policy Paper is expected to be released in the second half of 2009 with a policy response to be published following consideration of stakeholder comments on both papers.

SCO, in fulfilling the MCE's commitment to a smart meter specific review of customer protection and safety issues, aims to carry it out in light of other MCE work programs, in particular the National Energy Customer Framework (NECF). Given that by the time most smart metering services are available for use the NECF will govern many relevant customer interface issues, SCO considers it appropriate to initially focus attention on what will be a joint national regime. In the second draft policy paper, SCO plans to address customer protection and safety issues that will continue to be governed by separate jurisdictional instruments.

Given the expected timing of smart meter roll-outs and the advanced stage of policy for the NECF, the NECF has been developed separately from the smart meter customer protection and safety policy review.

This paper contains draft policy proposals on the smart meter customer protection issues that are most relevant to the NECF, using the first exposure draft of the NECF as a base reference document. The paper also identifies a number of areas where SCO considers further work is required.

Stakeholder feedback is sought on the draft policy proposals contained in this paper to help guide any necessary further work and final policy positions.

## **Background on smart meters and the development of the NECF**

### Smart meters

In April 2007 the Council of Australian Governments (COAG) committed to a national mandated roll-out of electricity smart meters to areas where the benefits outweighed the costs. COAG referred work on smart meters to the MCE. The MCE subsequently commissioned a national cost-benefit analysis of smart metering and direct load control (DLC) taking into account different market circumstances in each state and territory and the circumstances of different groups of customers.

In December 2007 the MCE supported a national minimum functionality for smart meters, with an initial list of functions to be further refined by stakeholders via the National Stakeholder Steering Committee (NSSC). The MCE noted that detailed technical and operational requirements including performance and service levels for smart metering should be further developed. To that end, the NSSC and issue-specific working groups have been formed to provide advice to the MCE on technical and operational aspects of the national framework and will coordinate pilots and

facilitate information sharing. Regulatory and procedural changes to support the NSSC's recommendations are expected to be completed by the end of 2010<sup>1</sup>.

On 13 June 2008 the MCE announced any mandated roll-out of electricity smart meters under a national regulatory, technical and operational framework would be conducted by distribution businesses. Victoria and NSW reaffirmed their commitment to a roll-out of smart meters, with over 5 million smart meters expected to be deployed by 2017. Jurisdictions (excluding Victoria, South Australia and Tasmania) will undertake extensive pilots and business cases prior to a further national review of deployment timelines by 2012.

### National energy customer framework

As agreed in the Australian Energy Market Agreement (AEMA), the MCE will transfer the non-economic regulation of energy distributors and retailers (excluding price regulation) to a national framework. This reform will result in the transfer of current State and Territory responsibilities to national Laws, Rules and other regulatory arrangements. This national framework is now referred to as the NECF.

The NECF is a national framework to regulate the sale and supply of energy to retail customers. It will cover a range of matters, including:

- A standard retail contract, minimum terms and conditions for market retail contract and other customer protections (i.e. hardship and marketing provisions) relating to the sale of energy to small customers;
- Contracts between distributors and customers relating to the supply of energy;
- Rights and obligations between retailers and distributors to support the sale and supply of energy to shared customers;
- Retailer authorisations; and
- Enforcement, compliance, performance monitoring and reporting by the Australian Energy Regulator (AER).

SCO released the First Exposure Draft of the NECF for stakeholder comment on 30 April 2009<sup>2</sup>.

## **Purpose and outline of this paper**

### Purpose of this paper

The broad scope of this paper is to outline and address the customer protection and safety concerns raised by stakeholders concerning the introduction of smart meters

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<sup>1</sup> For more information on the NSSC workplan visit the [NSSC website](http://share.aemo.com.au/smartmetering/default.aspx) <http://share.aemo.com.au/smartmetering/default.aspx>.

<sup>2</sup> The First Exposure Draft of the draft NECF is available at the MCE website.

and their possible impact on the NECF which is currently being developed for the MCE.

This paper identifies parts of the draft NECF where there is policy overlap with smart meters and proposes possible future amendments to deal with issues associated with a smart meter roll-out. It should be noted that the first draft of the NECF is still subject to revision in response to stakeholder's comments during the consultation process.

The intent of this paper is to outline draft policy positions to maintain appropriate customer protections and/or maximise the benefits of smart meters without impacting the effectiveness of the customer protections available to small customers with other meter types.

SCO is seeking stakeholder feedback on these draft policy positions to guide consideration of a final policy position. Having considered stakeholder comments, where appropriate SCO will incorporate final policy positions into the second exposure draft of the NECF, with a discussion of those positions included in the explanatory memorandum. A complete response to stakeholder comments and final policy positions on customer protection and safety issues associated with smart meters will be included in a final policy paper.

This paper notes a number of areas where further work is required before a final policy position can be reached. This policy can be implemented at a later time by proposing changes to the National Energy Retail Rules once they are in place.

In addition, the experience gained in initial roll-outs, pilots and trials or the work of the NSSC will also be considered and if necessary result in further refinements to the national Law and Rules. The MCE will submit an appropriate Rule Change Proposal to the Australian Energy Market Commission (AEMC) if required, after the NECF is established.

The draft NECF has been developed with current metering arrangements in mind therefore may not fully consider the impacts of smart meters and the additional services they enable. The establishment of a customer protection regime for smart meters should be seen as an ongoing process, which will develop as more information and understanding of the national framework for smart meters and related smart meter functionality and performance / service standards becomes available.

Stakeholder comments on the draft policy positions in this paper should be confined to only those customer protection issues raised. Stakeholder feedback on broader issues related to the national smart meter program, such as regulatory or operational issues, should be addressed through their individual consultation processes coordinated by SCO or the NSSC.

Stakeholder feedback on broader issues related to the draft NECF should be submitted to the separate consultation process for the draft NECF.

### Outline of the paper

Sections 2-9 of the paper consider each smart meter customer protection issue individually and discuss the relevant draft NECF provisions that apply. Each section also includes SCO's consideration of the issue and a draft policy position. Stakeholder comments are sought on all draft policy positions.

The draft policy positions made in this paper are based on the First Exposure Draft of the NECF and were developed taking into consideration the Explanatory Memorandum attached to that draft.

The smart meter issues discussed in this paper are:

- Distributional impacts of time-related pricing;
- Customer billing;
- Direct load control (DLC);
- Supply capacity control;
- Remote de-energisation;
- Retailer marketing through the use of in-home displays;
- Prepayment metering; and
- Embedded generation.

### Non-NECF issues

Some of the customer protection issues raised by stakeholders relate specifically to jurisdictional concession frameworks and safety regulation which remain the responsibility of jurisdictions under the AEMA.

Following the release of the final Policy Paper and the second draft of the NECF, SCO will separately address any such non-NECF issues related to smart meters.

The following issues will be considered in this second stage:

- Installation of smart meters;
- Customer education and information;
- The implications of the National Minimum Functionality on embedded generation;
- Data and meter security;
- Off peak electric hot water and space heating units;
- Cost reflective network pricing; and
- Customer safety.

SCO expects these issues will be considered by individual jurisdictions at the appropriate time depending on roll-out commitments, although SCO may develop policy principles or generic recommendations that jurisdictions could use in such a review.

SCO, based on advice from the NSSC, may make recommendations to jurisdictional safety authorities where regulation varies across jurisdictions that may benefit from harmonisation or an agreed approach. As an example, re-energisation requirements are covered by jurisdictional safety regulations and currently differ across jurisdictions.

## Retailer of last resort

Retailer of last resort (RoLR) arrangements are intended to ensure that electricity customers continue to receive electricity supplies in circumstances where their existing retailer is unable to continue to provide that supply. A RoLR event may occur when a retailer ceases to be authorised to sell electricity or is unable to access electricity in the wholesale market to supply its customers. Currently RoLRs are identified in advance, usually by area through jurisdictional legislative frameworks to ensure the RoLRs and regulators have an opportunity, and usually an obligation, to prepare in advance the terms, tariffs or charges that will apply to a future RoLR supply.

Retailers have suggested that giving the RoLR access to historical consumption information from a smart meter may have benefits to the RoLR and customers.

SCO intends to investigate this issue in the development of a national RoLR scheme, rather than through the smart meter customer protection and safety review. Accordingly, any feedback on this paper provided by stakeholders regarding this issue will be considered as part of the RoLR policy development process.

## 2. Distributional impacts of time-related pricing

SCO has considered customer protection issues arising from the expected offer or application of time-related prices by businesses following a smart meter roll-out.

Consideration of these issues requires an understanding of the existing cross subsidy between customers that results from load profiling under accumulation metering. The following sections provide an explanation to give readers an understanding of the fundamental shift in cost allocation time-related metering has the ability to enable.

### Existing cross subsidy

Average load profiles are currently used in the national electricity wholesale market to bill retailers for the consumption of their customers where those customers have an accumulation meter.

Load profiling averages the contribution of individual customers to the time-related cost structure across all customers within a distribution area. This includes customers of all retailers operating in that area. All retailers in an area therefore share a similar energy cost profile, regardless of the consumption habits of their customers. This averaging cannot be removed without meters that measure the actual time of use by individual customers.

Load profiling of small customers creates cross subsidisation among customers. This cross subsidy can be explained as follows:

- Those customers using most electricity at peak times drive the need for capacity to meet peak demand – both network capacity and generation capacity;
- The cost of providing peak network capacity is reflected in the price retailers pay to networks in the form of higher overall network use of system charges, without any reflection of which customers are driving the costs;
- The cost of providing peak generation capacity is reflected in the price retailers pay in the spot market and for hedging contracts. Again the price paid does not reflect which customers are driving the costs because net system load profiles are used for settlement; and
- Retailers pass peak wholesale energy costs, both generation and network, on to all customers in the form of higher per-unit prices, rather than passing them on specifically to those customers driving the costs.

### Wholesale market implications for retail pricing as a result of smart meters

The ability of smart meters to record usage data in half hourly intervals means retailers are better able to reflect wholesale market energy costs in their tariff offerings to unwind any cross subsidy between customers (where they choose to).

Following the introduction of smart meters retailers have the choice of continuing to offer a flat tariff or offering a time-related price such as a Time of Use (TOU) tariff or Dynamic Peak Price (DPP)<sup>3</sup> to better represent the wholesale cost of electricity

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<sup>3</sup> Dynamic peak pricing is where a higher electricity usage tariff is charged during critical peak events that are called by the network service provider to manage network peaks. The number

during peak demand periods (subject to jurisdictional price regulation where it applies).

Not only will smart metering enable more efficient pricing, it will provide incentives and information to customers on their energy use. Other smart meter functionalities, such as remote reading may also enable retailers to offer more innovative products and services and enable more frequent billing.

### Network pricing

Half-hourly interval data recording also enables distributors to charge time-reflective network pricing. This network component of the bill can be passed through by retailers allowing customers to be charged a higher rate during times of peak demand on electricity supply infrastructure because of high consumption or network constraint.

As is current practice, network tariffs will be assessed by the AER according to guidelines in the National Electricity Rules (NER).

### Expected efficiency gain

It is expected that some customers will take up more differentiated tariff offers and respond to them in order to reduce their bills. Over the long term, these changes in patterns of demand for energy are expected to provide benefits either through reduced costs for supplying energy and network infrastructure, improved reliability, or both. These benefits form part of the cost-benefit case expected from smart meters. Reductions in costs for other services, such as meter reading, form a larger proportion of the benefits case, meaning that the a roll-out of smart metering is not predicated on all consumers taking up or responding to time-related pricing in like manner or to a similar extent.

### **Potential customer protection issue**

Where customers are not able to choose a single rate retail tariff, a potential customer protection issue arising from unwinding existing cross subsidies is the possibility that some customers without the flexibility to respond to time-related tariffs may consequently face an increase in their cost of electricity that may create or worsen a hardship situation.

The introduction of time-related retail pricing also has the potential to increase bill volatility for customers because there may be a greater difference between high and low bills. As is the case now, customer bills are likely to be higher in summer and winter<sup>4</sup> periods and lower in spring and autumn periods. This difference could potentially be increased by time-related pricing but this would be dependant on the structure of the tariff and the extent to which retailers pass on variable wholesale energy costs or any time-related network tariff. Also, the overall change in a

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of annual critical peak events is usually limited and there are requirements on the length of notice of the critical peak event that must be provided. Customers are compensated for participation in a critical peak pricing program through reduced ongoing charges for electricity use. (AEMC Review of Demand Side Participation in the National Electricity Market - NERA Economic Consulting)

<sup>4</sup> Tasmania is a winter peaking state.

customer's bill will depend on how they respond to the price signal provided by the tariff.

Where a customer is unable to respond adequately, and does not have sufficient cash flow to manage occasional higher bills, the possible increase in the difference between high and low bills could potentially lead to an increase in temporary energy-related hardship cases and demand for bill smoothing products and temporary energy-related hardship assistance.

Any bill impacts will depend in the first instance on whether new products are offered by retailers and the nature of those products. This will, in part, be affected by the distribution network tariff component of the product. The impact will then depend on the customer's ability to choose between different tariff products and to respond to any new tariffs that they are charged.

## **Consumer impact analysis**

SCO engaged Energy Market Consulting associates (EMCa) to conduct a Consumer Impact Analysis to better understand the potential materiality of these issues, including whether any particular classes of customer might have limited ability to respond to time-related pricing following the introduction of smart meters. The analysis reviewed studies undertaken by EnergyAustralia and Integral Energy across a sample of 2,000 and 1,154 households, respectively, in New South Wales (NSW).

EMCa's initial analysis of underlying costs indicated that approximately half the customers in the sample would be better off under cost-reflective pricing and the other half would be worse off. This represents the existing cross subsidy between customers. How this would be reflected in practice for consumers would depend on the extent to which retailers choose to reflect underlying costs in retail tariff offers.

There was no trend for any particular customer group to be better or worse off, with the mean for all groups being about the same. However, there was a narrower range of variation for hardship customers in the sample compared to the general sample – meaning they were less likely than the general sample to experience a change in their bill.

The analysis assessed the potential impacts on an annual basis and on a seasonal basis. The seasonal analysis revealed that customers are likely to face bill increases in summer periods (especially those with air conditioners) but lower bills in autumn and spring periods. The analysis found that bills in winter periods were similar for those customers in the sample with time-related pricing and those without<sup>5</sup>.

However, the analysis was undertaken on data from an unusual sample period in which the average pool price was six times the average pool price for the previous three quarters. The results are based on one year of data, which included an unusually cool summer in New South Wales and may have had an impact on the level of demand response.<sup>6</sup>

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<sup>5</sup> This may not be the case in jurisdictions that have a winter peak.

<sup>6</sup> EMCa Smart Meter Consumer Impact: Initial Analysis, pg. 74

EMCa analysed the applicability of the EnergyAustralia and Integral studies for the broader Australian population. The full report provides indications of possible outcomes in other states and territories. The report is available at [http://www.ret.gov.au/Documents/mce/emr/smart\\_meters/default.html](http://www.ret.gov.au/Documents/mce/emr/smart_meters/default.html)

## **NECF hardship provisions**

SCO has adopted a fundamental policy that customers experiencing financial difficulties in paying energy bills should not be prevented from access to essential energy services, unless appropriate processes and procedures have been followed.

In accordance with the draft NECF, retailers will be required to develop, publish and implement a Customer Hardship Policy, which includes policies and programs to be made available to residential energy customers who experience genuine hardship.

This policy must include:

- Flexible payment options (including a payment plan) for the payment of energy bills by hardship customers;
- Processes to identify appropriate government concession programs and appropriate financial counselling services and to notify hardship customers of those programs and services; and
- An outline of a range of programs that the retailer may use to assist hardship customers.

These provisions allow retailers flexibility in managing their hardship programs to enable them to develop innovative approaches to addressing hardship. A key requirement for the policies is that they include flexible payment options for hardship customers. Under the new hardship framework, the AER will undertake performance reporting on specific hardship indicators.

## **Concessions frameworks**

In addition to the hardship provisions in the draft NECF, each jurisdiction has a concessions framework to assist customers who may face difficulties paying their energy bills. Each jurisdiction offers different targeted concessions according to its specific socio-economic demographics. As an example, energy concessions are available for pensioners in all jurisdictions.

## **SCO consideration of potential distributional impacts and bill volatility**

At this stage SCO does not propose any change to the draft NECF hardship provisions in relation to time-related pricing. SCO notes the initial findings from the Consumer Impact Analysis, but also acknowledges the caveats provided by EMCa on the validity of the results. These caveats highlight the difficulty of predicting the impacts of future tariff offers, especially in jurisdictions outside of NSW.

SCO acknowledges that there may be an increase in bill volatility as a result of time-related pricing, however this volatility may be counteracted by savings over the course of the year and by more common use of monthly billing enabled by remote meter reading. The cost-benefit analysis commissioned for the MCE identified more widespread monthly billing as one possible change in practices following the

installation of smart meters and may assist customer to pay their bills on time<sup>7</sup>. SCO notes that monthly billing is now common practice in industries where meter reading is not a constraint, such as telecommunications.

Where a retailer offers monthly billing, any increases (or decreases) to the bill, would be in smaller increments and enable customers to adjust to seasonal variation gradually. Monthly billing, or other alternative retailer services, such as in-home displays or website information may also give customers more opportunities to monitor energy usage. Time-related pricing is also compatible with existing or new bill smoothing arrangements permitted under the draft NECF.

In situations where bill volatility leads to a temporary hardship situation, the draft NECF hardship provisions for retailers to offer flexible payment options (including payment plans) are expected to provide adequate protections to customers. Irrespective of the factors leading to the hardship, the draft NECF hardship provisions are general in scope and will not require amendment at this stage as a result of smart meters.

Outcomes of pilots and trials and the Victorian roll-out of smart meters will continue to be assessed to confirm that the NECF hardship regime, in combination with jurisdictional concession frameworks, provides adequate protection for customers in hardship, including customers who experience hardship after taking up a time-related tariff.

**Draft policy position 1:** SCO does not propose any smart meter-related changes to the draft NECF hardship provisions at this stage.

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<sup>7</sup> KPMW, *Cost Benefit Analysis of Smart Metering and Direct Load Control – Phase 2: Retailer Impacts*, p.101

### **3. Customer billing**

The ability of smart meters to record consumption data in half hourly intervals and be read remotely differentiates them from accumulation meters which only record total consumption over an extended period and are generally read manually. This difference complicates existing billing requirements and also presents opportunities to provide customers with more useful information on their electricity bills.

#### **Draft NECF provisions on billing**

Part 2 Division 4 of the National Energy Retail Rules (NERR) outlines provisions related to customer billing. The key provisions relevant to smart meters include:

- Estimation of bills – at times meter data is not available on which to bill a customer so the retailer has to substitute an estimated meter read in place of the actual read;
- Bill content requirements – the bill content requirements in the draft NECF specify the minimum amount of information a retailer must provide to customers. This includes billing period, consumption data, tariff information and payment methods;
- Historical billing information – the draft NECF allows a customer to request historical billing data from their retailer to assist them to understand the basis of their bill; and
- Overcharging and undercharging procedures – the draft NECF recognises that undercharging and overcharging occurs at times and outlines the responsibilities of the retailer and customer in either scenario.

#### **Potential customer protection issues**

Several potential customer protection policy issues related to billing requirements may arise with the transition to smart metering and time-related tariffs – namely in the areas of:

- Bill reconciliation against a smart meter;
- Reconciliation of bill charges;
- Overcharging and undercharging;
- Estimations;
- Presentation of consumption information; and
- Access to historical billing data.

Each of these areas is discussed below.

#### **Bill reconciliation against a smart meter**

Currently, where there is an accumulation meter in place there is an expectation that a customer should be able to check that they have been billed correctly by reading the meter themselves and comparing it with a meter reading shown on their bill.

Customers can expect there to be little variation between the two readings, allowing for a delay between the retailer's meter read date and the time the customer receives the bill. Bills are required to indicate when an estimate is used, so that customers know they should expect more variation between the billed amount and any actual reading they make themselves.

Some stakeholders have suggested that it will not be possible for customers to check that they have been billed correctly in this way once smart meters are installed.

This section considers the initial issue of whether it is possible for a customer to make any basic checks that their meter is working.

Where meter data (either accumulation or interval) is temporarily unavailable, usually for technical or meter access reasons, the missing meter read is substituted using an estimation process which is defined in the National Electricity Market (NEM) Metrology Procedures (except in WA and NT). The substitution may be made using historical data from the same customer from a similar period or a customer with similar usage patterns. The metrology procedure allows substitutions to be corrected where actual meter data becomes available within a certain period of time. If actual meter data cannot be recovered within a certain period of time, or is permanently lost, then a final substitution may be made. Analysis by the Essential Services Commission of Victoria (ESCV) indicates that in practice the extent of substitution is small.

The Australian Energy Market Operator (AEMO) will develop Metrology Procedures for smart meters, with advice from the NSSC, following the finalisation of technical and operational specifications; however SCO expects that similar arrangements will apply.

Half-hourly meter data has the potential to complicate bill reconciliation because of the increased number of meter readings. Current accumulation metering bills are based on either one reading or one estimation per quarter. With smart metering one quarterly billing period will comprise approximately 4416 individual meter readings (92 days x 48 half hours per day). On first view, this presents an increased number of opportunities for failed meter readings and therefore for substitutions. However, remote reading is expected to reduce the risk of a failed reading for any particular half hour, and also to significantly reduce substitutions for meter access reasons. Daily reading is expected to reduce the risk further, as it allows any failed readings on one day to be corrected on the next day.

The expected process of correcting any temporary substitutions on following days means that any substitutions used to calculate a bill should be confined to the last days of the billing period. Consequently, a total consumption figure included on a bill (including the effect of any substitutions) should correspond fairly closely to the total of all readings actually taken by a meter during that billing period. A customer could therefore check that their bill is approximately correct by comparing an accumulated total shown on the meter with an accumulated total shown on their bill.

A further complication arises through a possible divergence over time between the accumulated total on the meter and the accumulated total presented on a customer's bill through the cumulative effect of final substitutions. It is possible this could be addressed in the metrology procedure by requiring substitutions to be calculated in a way that corrects any divergence from the accumulated total caused by past substitutions. This would require that the interval data and an accumulated total were

both read from the meter. SCO has not examined the technical issues surrounding this possibility.

Some stakeholders believe that there may also be a difference between the accumulated total on the meter at the end of the billing period and the time the meter is remotely read, which may be several hours later. This concern assumes that meter communications channels will be inadequate for all relevant meters to be read at midnight on the last day of the billing period. However, each interval will be labelled with the time period to which it refers, so any time periods in a reading that occurred after midnight on the last day of the billing period could be ignored in the bill. In any case, the time difference is not significant compared to the time between the end of the billing period and the delivery of the bill to a customer.

Where a customer is billed on a time-related tariff, it is important that the meter's clock is accurate and that the correct interval data is used for billing purposes. The Rules and metrology procedures set out requirements for maintaining meter time. Where a meter displays the time, customers are also able to check themselves whether it is correct.

The ESCV recently discussed these matters further with a forum of retailers, distributors and customer representatives to gain a better understanding of technical barriers to bill reconciliation.

### **SCO consideration of bill reconciliation against a smart meter**

Customers with smart meters will have more regular meter readings, which should enhance their ability to monitor consumption and reduce the likelihood of a bill where the entire amount is estimated. However, it is likely that substitutions will still need to be done where data is permanently lost or temporarily lost at the end of billing periods.

Energy bills are the major form of communication between a customer and their retailer. An important element of customers' confidence in their bill is knowing that the meter is working properly and they are being billed for the right meter. The accreditation, metrology and procedural requirements set out in the Rules and subsidiary instruments are expected to provide a strong degree of confidence that readings from smart meters are accurate and interpreted correctly. The ability for customers to check that their meter ID corresponds to their bill, and to check that the meter clock is correct, should enhance this confidence by allowing them to identify those few cases where an error is made.

Subject to the resolution of any technical issues, SCO considers that customers with smart meters should be able to reconcile their bill against their meter with a reasonable degree of certainty. To enable this, smart meters should be able to display some form of consumption total to which the customer can refer. This could be a rolling accumulated total for the meter. Regardless of the tariff structure, a bill should provide the equivalent information. The meter display should also show the correct time to provide customers with a way to check that any time-related tariff they are billed on has used consumption from the correct part of the day.

To support retailers in providing accurate bills SCO expects that the Metrology Procedures for smart meters will require the Meter Data Provider (MDP) to provide the retailer with actual meter reads at the next opportunity following a substitution. SCO considers that this will assist to ensure temporary substitutions do not reduce bill accuracy.

**Draft policy position 2:** SCO proposes that all customers with smart meters should be able to check that their meter is working correctly, and reconcile their bills against their meter with a reasonable degree of certainty.

**Further work:**

- SCO will consider the outcomes of the ESCV forum (and any other relevant discussions) to help guide any necessary further work. If appropriate, SCO will collaborate with the ESCV, and other regulators, to develop the best approach to prescribing bill content requirements.
- SCO proposes that there should be further consideration of the requirements for bill reconciliation by customers when developing the technical requirements for smart meters under the national framework.

### **Reconciliation of time-related bill charges**

For a customer on a time-related tariff an aggregated consumption figure will not help them reconcile their consumption with the total bill charge as the electricity will have been charged at different rates across the day. For the customer to reconcile a time related tariff bill, a breakdown of consumption according to tariff segments (e.g. peak, off-peak, shoulder) would be necessary. This could be achieved either via the bill or some other means such as access to the full bill details via the internet.

### **SCO consideration of reconciliation of bill charges**

SCO expects that time-related pricing is likely to be more widely offered following the introduction of smart meters and that understanding how bills are calculated may be more difficult for customers on such tariffs. To assist customers to better understand their electricity consumption and reconcile this against their bill charges, it is proposed that retailers provide customers on a time-related tariff with consumption data for each tariff segment (e.g. peak, off-peak, shoulder). This approach will also provide customers with the appropriate information and enable them to respond to any time-related price signal

**Draft policy position 3:** SCO proposes that retailers provide customers on time related tariffs with consumption data for each tariff segment (e.g. peak, off-peak, shoulder) on their bill to enable them to reconcile their bill charges.

### **Overcharging and undercharging**

A customer may be over- or under- charged for a wide range of reasons, for example faulty meters, incorrect connections leading to incorrect data, incorrect current transformer ratios, communications failures, and simple clerical errors. In some cases there will be a simple remedy for the problem allowing the correct charge to be worked out. In other cases it will not be possible to be certain of the real consumption and so of the correct charge. In these cases, a bill may need to be based on a reasonable estimate.

The following discussion focuses on the process of estimation, particularly in the context of the range of product and tariff offerings that might be offered to customers once interval data is more widely available. Other sources of over- and under-charging do not appear to be affected by the adoption of smart meters, and hence they are not considered further here.

The process of estimating and substituting for missing data for smart meters is expected to work similarly to that currently in place for other meter types. Whilst the overall significance of estimations with smart meters may be lower than with accumulation meters because of remote daily reading, there will still be instances of undercharging or overcharging where time-related pricing is in place.

The draft NECF proposes that where a customer is overcharged by more than the *overcharge threshold* (with an initial threshold of \$50 proposed) the retailer must contact the customer within 10 business days and arrange to have the overcharge returned to the customer either as a credit on their next bill or by other means as reasonably directed by the customer. Where a customer is undercharged the retailer is entitled to recoup that undercharge amount in no less than the period over which the undercharging occurred, which is likely to be a quarter.

The possible introduction of DPP tariffs present a unique challenge to existing estimations processes because Meter Data Providers will have little reference point on which to base an estimation. There are many variables associated with customer response in a DPP event therefore historical behaviour on one DPP event may not necessarily be an indicator of what will happen in the next event. With the potential for the tariff to be substantially higher during a DPP event than tariffs outside those times, any overcharging or undercharging from estimation during DPP events could be larger than a flat or TOU tariff. Where such an overcharge or undercharge is a result of a temporary substitution that is subsequently corrected, the draft NECF provisions will already adequately deal with the process for correcting any charges and there is no new issue. However, in the rare but possible case that a DPP event corresponds with an unrecoverable meter reading for the period, the question arises of whether any reasonable estimate can be determined.

This paper only considers overcharging or undercharging from the customer protection perspective and therefore focuses on the retailer/customer relationship in an overcharge or undercharge situation.

## **SCO consideration of overcharging and undercharging**

SCO recognises the added complexities that interval data and time-related pricing add to estimation processes to produce substitutions in comparison to existing estimation processes. However, increased meter readings may lead to more accurate reads, less of a need for estimation and faster recovery of missing data.

SCO notes the specific challenge that missing data during a DPP event presents and does not consider it appropriate for customers to be charged on a substituted read based on historical data (as in the current metrology procedures). Where no alternative approach can be developed and where the data is permanently lost, SCO proposes that customers should be charged for estimated electricity consumed at a non-DPP price. In situations where data is temporarily lost and recovered later the customer should be charged accordingly for their usage during the event consistent with the overcharging and undercharging provisions in the draft NECF.

SCO proposes that any liability issues that result from this situation are addressed in accordance with existing arrangements in the Metrology Procedures related to faulty metering.

Stakeholder feedback is sought on alternative approaches.

SCO considers the overcharging and undercharging arrangements in the draft NECF to be appropriate to address overcharging or undercharging where a customer is on a flat or time-related tariff other than a DPP tariff.

**Draft policy position 4:** SCO proposes in situations where meter data is permanently lost in a DPP event that substitutions not be based on historical data. SCO proposes that customers should be charged for estimated electricity consumed at a non-DPP price.

**Draft policy position 5:** SCO does not propose any smart meter related changes to overcharging or undercharging provisions in the draft NECF.

**Further work:**

- Possible estimation processes for DPP events should be considered for inclusion in the Metrology Procedures for smart meters. This should include an alternative process to using historical data for determining substitutions for missing data in DPP events.

## **Estimations**

Under the current bill content requirements in the draft NECF a retailer must advise the customer if their bill is the result of a meter read, metering data or an estimation. This requirement is straight forward under accumulation metering where the bill is based on one manual meter read however it is not as clear with smart meters when 48 reads are done remotely each day.

Under the current proposed requirements a retailer would have to advise the customer that the bill charges were based on estimation if one of the half-hourly intervals was estimated for technical reasons. This may or may not be a realistic reflection of the accuracy of the bill. Requiring retailers to inform customers with smart meters what part of their bill is estimated gives customers a clearer indication of the basis for their bill charges.

## **SCO consideration of estimations**

SCO considers it appropriate that retailers be required to advise customers of the scope of any estimation on their bill. However, to prescribe additional detail on customer's bills would require amendments to the proposed provisions in the draft NECF. Such a requirement should only be applicable to customers who have smart meters. Possible examples include a requirement to show estimations:

- As a percentage of total reads (e.g. 2 per cent of the meter reads on this bill were estimated);
- In literal terms (e.g. 14 out of the 4416 meter reads for this bill period were estimated); or
- In monetary terms (e.g. estimated reads account for \$28 of this bill total).

**Draft policy position 6:** SCO proposes that retailers be required to inform customers with smart meters of the scope of any estimation on their bill.

## Presentation of consumption information

Time-related tariffs add a layer of complexity to the way consumption data is used to bill customers. It shifts the emphasis from a total end use amount to an emphasis on both how much and when electricity is used. Details of a customer's consumption profile become more important with time-related pricing as:

- Reduction in consumption during peak periods is reliant on customers being aware of their electricity use and costs during that period. These pricing signals may encourage customers to change their behaviour; and
- Customers would benefit from having relevant consumption data to enable them to make informed decisions when considering time-related tariff offers from their existing retailer or other retailers. For example, if a retailer is offering a tariff with peak, shoulder and off-peak rates it is useful for customers to know when they use the bulk of their electricity to consider the impact of changing tariffs.

Bill content requirements currently proposed in the draft NECF only require that a retailer show details of consumption or estimated consumption and do not specify how this should be presented.

The final NECF may also require retailers to provide an energy benchmark to enable customers to compare their consumption against a geographic comparator. These requirements are currently under consideration.

## SCO consideration of the presentation of consumption information

SCO is mindful that one of the drivers of smart meters is the ability to give customers better information and price signals via time-reflective pricing to encourage them to use less electricity during peak periods when strain on infrastructure is at its greatest. For price signals to be most effective customers need to be able to see the impact of their response (or lack of response) during peak periods on their bill. As discussed earlier in this chapter, SCO proposes that retailers provide customers on a time-related tariff with consumption data by tariff segment (e.g. peak, off-peak, shoulder) on their bill. Providing this information is expected to encourage behavioural change and reductions in peak usage.

SCO expects that the presentation of this information on a bill could be integrated with other bill content requirements, including the anticipated bill benchmarking requirements.

This draft policy position also serves an important purpose in encouraging retail competition (where applicable) because it enables customers to compare their time-related tariff offer with that of another retailer. It is vital that customers are able to see how their electricity consumption varies across a day to determine what tariff offer is most appropriate to them.

**Draft policy position 7:** As proposed in draft policy position 3, SCO proposes that retailers provide customers on a time-related tariff with consumption data for each segment rate (e.g. peak, off-peak, shoulder) on their bill.

## Historical billing data

The draft NECF requires retailers to provide a small customer with up to 12 months historical billing data where the customer requests it. The draft NECF does not

currently define 'historical billing data'. A definition may be useful to clarify what retailers are required to provide to customers. Under smart metering there are approximately 4416 meter reads per quarter (92 days). Whilst some customers may want a full set of metering data, others may find a summary more useful.

## **SCO consideration of historical billing data**

SCO supports the obligation on retailers to provide a customer's historical billing information where requested. SCO also acknowledges the increased volume and complexity of smart meter data but considers that the customer should have the maximum amount of information made available to them to the level they require. SCO proposes that the NECF define 'historical billing data' so that it is clear that retailers must be able to provide:

- The full set of metering data on which the bill was based; and
- A summary of the meter data on which the bill was based.

SCO proposes that it be at the customer's discretion as to which of these levels of detail they require.

Provision of the information should be consistent with conditions outlined in the draft NECF, including the circumstances in which a small customer may be charged for the data provided. The conditions do not set out the format or method of providing data, reflecting that information may be made available in several ways, including electronically.

**Draft policy position 8:** SCO proposes that the draft NECF define 'historical billing data' so that it is clear that retailers must be able to provide:

- the full set of metering data on which the bill was based; and
- a summary of the meter data on which the bill was based.

SCO proposes that it be at the customer's discretion as to which of these levels of detail they require.

## 4. Direct load control

The inclusion of a Home Area Network (HAN) interface in the National Minimum Functionality enables distributors and/or retailers to sign customers up to direct load control (DLC) programs. DLC is the process where a distributor or retailer control specific household appliances and reduces the electricity consumption of that appliance for a specified time, with the customers consent, in return for a financial incentive (e.g. direct payment or tariff reduction). Commonly controlled appliances include air-conditioners and pool pumps.

The access arrangements, participant service levels<sup>8</sup> and customer service standards<sup>9</sup> for DLC are to be developed by the NSSC. The regulatory and procedural changes to support these requirements are expected to be finalised by the end of 2010.

### Potential customer protection issues

Stakeholders have queried if DLC will be considered a standard service and raised concerns that customers will automatically have their appliances controlled by distributors or retailers. Consumer group representatives have raised some concerns as to which appliances will be controlled. There is also a broad concern that customers will not be made fully aware of the conditions of a DLC program prior to signing up.

### NECF contracting provisions

The draft NECF does not specifically refer to DLC, however it does outline minimum terms and conditions for retail and distribution contracts. Standard retail contracts refer to matters such as billing, payment and hardship provisions, whilst standard distribution contracts refer to matters such as connection arrangements, energisation and de-energisation and interruptions to supply.

The *Retail Support Terms and Conditions* outline standard arrangements between retailers and distributors and refers to matters such as de-energisation, distribution charges, information sharing and a process for handling customer enquiries and complaints.

The draft NECF also allows for negotiation of non-standard services between customers, retailers and distributors with appropriate regulatory oversight.

### SCO consideration of direct load control

SCO considers that DLC should be expressly agreed to by customers before distributors and/or retailers are able to apply it under contractual arrangements with customers.

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<sup>8</sup> Proposed definition by the NSSC Business Requirements Working Group: *The time required to complete a service between industry participants.*

<sup>9</sup> Proposed definition by the NSSC Business Requirements Working Group; *The time required to complete a service to a customer.*

Contracting arrangements for DLC could be done either as:

- A clause of the standard retail or distribution contract which only takes effect where informed consent is provided by the customer;
- Part of a separate market contract agreed by the customer and retailer or distributor; or
- Both, whereby the default terms in a standard contract (requiring informed consent before coming into operation) may be varied in a market contract.

SCO acknowledges stakeholder concerns over the manner in which DLC will be undertaken and the need for adequate customer protections around this function. However, SCO is mindful that advice on access arrangements, service levels and service standards for DLC is still to be developed by the NSSC. These are likely to have an impact on all contracting relationships (customer/retailer/distributor). SCO will await the finalisation of the NSSC's work before considering the most appropriate approach to contracting for DLC and if any changes to the draft NECF are required, including any required minimum terms and conditions.

**Draft policy position 9:** SCO does not propose any changes to the draft NECF at this stage to regulate direct load control<sup>10</sup>.

**Further work:**

- SCO will propose any necessary changes to the NECF to accommodate DLC upon completion of the NSSC's work on access arrangements, service levels and service standards.

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<sup>10</sup> Noting that, as stated in the Explanatory Memorandum accompanying the NECF First Exposure Draft, distributors will be permitted to interrupt supply in accordance with existing DLC arrangements and interruptible tariffs.

## **5. Supply capacity control**

The supply capacity control function of a smart meter would provide the technical capability to set a capacity limit on a customer's energy. Unlike DLC, the customer would have discretion as to what appliances they choose to use within their capacity limit. The smart meter would allow individual capacity limits to be set and remotely adjusted as necessary.

Pending appropriate business-to-business arrangements, this function could be controlled by distributors or retailers. The access arrangements, service levels and service standards for supply capacity control are to be developed by the NSSC. The regulatory and procedural changes to support these requirements are expected to be finalised by the end of 2010.

It is foreseeable that retailers may wish to use supply capacity control as part of a payment plan or as an alternative to de-energisation where a customer is experiencing payment difficulties.

There are two foreseeable types of distributor supply capacity control – involuntary and voluntary.

- Involuntary supply capacity control - used for load curtailment in emergency situations or unforeseen network outages. Supply capacity control through smart meters could allow distributors to load shed in a more even-handed fashion by reducing capacity to a wider group in place of concentrated blackouts. Supply capacity control could also be useful in restoring supply gradually until it reaches full capacity again; and
- Voluntary supply capacity control - customers agree to limit supply to their premises at a time of network constraint in return for a financial incentive.

A special case is that voluntary supply capacity control could also be used for parts of a distribution network designed with limited capacity to serve a small number of customers.

### **Potential customer protection issues with retailer use of supply capacity control**

Consumer groups have raised concerns about retailers using supply capacity control as a punitive measure against customers for non-payment as it potentially limits access to basic household necessities such as heating, cooling and cooking. This issue has not been covered in the draft NECF.

### **Potential customer protection issues with distributor use of supply capacity control**

Any potential customer protection issues relate to voluntary capacity control where the customer signs up to a market offer from their distributor. Possible customer protection issues related to supply capacity control include:

- Appropriate notification requirements to inform customers of the conditions of the supply capacity control contract upon signing up;
- Protections required for people with medical conditions or people on life support; and

- A defined minimum supply capacity limit to prevent customers from being offered a product that would deprive them of basic household necessities like heating, cooling and cooking.

Supply capacity control can have direct benefits for distributors in managing consumption during times of network constraint therefore distributors are likely to recruit customers directly to sign up for programs. This direct relationship may create the need for marketing requirements for distributors similar to those imposed on retailers. This issue is also relevant to the marketing of other products by distributors, such as DLC.

## **Draft NECF marketing provisions**

The draft NERR contains the National Energy Marketing Rules (the marketing rules). The marketing rules outline the responsibilities of retailers and other marketers in relation to the manner in which they market their products to small customers. The marketing rules include requirements regarding agent identification, information disclosure and records handling. The marketing rules apply only to retailers or their associates for the purpose of forming a market retail contract. Retailers are also subject to other relevant Commonwealth, State and Territory Fair Trading Acts.

The marketing rules have been created as energy is considered an essential service and appropriate guidelines are considered necessary to ensure small customers have sufficient information and protection in negotiating arrangements for their energy supplies. The marketing rules currently apply to retailers only as the draft NECF did not envisage distributors undertaking marketing activities which may result in an increased likelihood of de-energisation.

SCO will re-evaluate the marketing rules following the introduction of the Australian Consumer Law, which is currently being developed by the Australian Government in response to the Productivity Commission Review of Australian Consumer Policy Framework. The Australian Consumer Law may render a number of the energy-specific marketing provisions unnecessary due to the creation of national generic legislation governing marketing.

## **Draft NECF provisions related to interruption of supply – relevant to involuntary supply capacity control**

The draft NECF does not specifically consider supply capacity control, however its use in emergency situations would most likely be treated as an *interruption* under the current proposed framework. An interruption broadly defines any type of temporary loss of supply or curtailment. It is unclear, however, whether supply capacity control would be classified as a *planned interruption* or an *unplanned interruption*. The draft NERR outlines the circumstances in which a distributor may interrupt supply to a customer's premises. The provisions also outline what steps the distributor must take prior to and following the interruption. These requirements vary depending on the type of interruption. These provisions relate only to distributors and make no allowance for a retailer to directly or indirectly (through the distributor) interrupt a customer's supply.

## **SCO consideration of supply capacity control**

Supply capacity control provides an opportunity to maintain a customer's connection to essential electricity supply in a situation where they may otherwise have been de-

energised. The draft NECF in its current form would not allow this. SCO does not wish to see load curtailment as the first step taken in hardship cases but sees benefit in it being available as an alternative where all the precursor steps to de-energisation have been met.

Supply capacity control is not currently considered a standard service within the deemed customer distributor contract, nor provided for in the standard retailer contract. Like DLC, contracting arrangements for supply capacity could be done either as

- A clause of the standard retail or distribution contract which only take effect where informed consent is provided by the customer;
- As a separate market contract agreed by the customer and retailer; or
- Both, whereby the default terms in a standard contract (requiring informed consent before coming into operation) may be varied in a market contract.

SCO will wait for the NSSC to advise on access arrangements, service levels and service standards for supply capacity control before considering the most appropriate contracting approach and whether any changes to the draft NECF are necessary.

SCO will also consider minimum terms and conditions for supply capacity control following completion of the NSSC's work. The terms and conditions are likely to include a minimum capacity limit that could be applied to any customer's premise. SCO would expect that this limit would not prevent customers from running basic appliances such as fridges, freezers, heaters, cooking appliances and lights. SCO expects that further work will be needed to identify the minimum kilowatt (kW) level required to run basic household appliances within the home.

SCO notes that the proposed marketing rules do not apply to distributors because, to this point, distributors have not undertaken any type of direct product marketing. The new capabilities enabled by smart meters may change this because distributors, although not operating in a competitive environment like retailers, may direct market to customers for products of network benefit such as supply capacity control or direct load control. SCO considers it reasonable that the marketing rules be extended to include distributors (or third parties acting on behalf of distributors) as they may direct market products (such as supply capacity control) in the future.

**Draft policy position 10:** SCO does not propose any changes to the draft NECF related to interruption of supply at this stage to regulate involuntary use of supply capacity control to manage emergency situations.

**Draft policy position 11:** SCO proposes that the National Energy Marketing Rules be extended to include distributors or third parties acting on behalf of distributors.

**Further work:**

- SCO proposes that further work be undertaken to advise SCO on the minimum kW level required to run basic household appliances within the home.
- SCO will propose any necessary changes to the NECF to accommodate supply capacity control upon completion of the NSSC's work on access arrangements, service levels and service standards.

## **6. Remote de-energisation**

The ability of smart meters to enable remote de-energisation removes the manual process of the distributor attending the site to disconnect the premises. Remote de-energisation is envisaged to occur in the same circumstances, and for the same reasons as manual de-energisation, but will occur from the distributor control point, rather than at a customer's premises.

### **Potential customer protection issue**

Stakeholders have raised concerns throughout previous consultation on smart meter issues over the ease and increased speed at which a de-energisation could occur using smart meters. This raises the question about whether there will be reduced opportunity for a customer to make payment. For this reason, some stakeholders are concerned that remote de-energisation may increase the number of people taken off supply.

Stakeholders have recommended that the level of notification given to customers with smart meters should be the same level of notification currently provided with manual de-energisation.

As the practice of the distributor representative visiting the site is no longer a final check to ensure the correct meter is being de-energised, it has been suggested that appropriate safeguards should be in place to ensure accuracy in remote de-energisation.

### **Draft NECF provisions on de-energisation**

The draft NECF includes the steps a retailer must undertake before de-energising a premises (via the distributor) including:

- grounds for de-energisation;
- notification requirements; and
- requirement to offer a payment plan to hardship customers prior to de-energisation for non-payment.

The draft NECF contains provisions outlining the circumstances under which a retailer may de-energise premises relating to specific scenarios, customer types or times when de-energisation may not occur. For example, a customer's premises may not be de-energised after 3.00pm on a business day.

The draft NECF also provides conditions for when a distributor can de-energise a premises (one of which is at the request of the retailer). Restrictions similar to those placed on retailers also apply to distributors.

### **SCO consideration of remote de-energisation**

The customer protection matters related to remote de-energisation do not differ very much from those presented by manual de-energisation and pose little, if any, additional harm to customers. In its development of technical procedures to undertake a remote de-energisation/re-energisation SCO understands that the NSSC

will review the appropriate checking mechanisms to ensure accuracy to avoid a situation where the wrong customer is de-energised.

There is no evidence to suggest that there will be an increase in the overall number of customers taken off supply as a result of remote de-energisation however should this be the case in pilots, trials or initial roll-outs an appropriate policy response may be considered.

To ensure customers are fully informed it would seem appropriate that the draft NECF be amended to provide notification requirements for retailers to advise customers that de-energisation may occur remotely rather than manually as is currently common practice.

SCO also notes the potential for smart meters to improve energisation and de-energisation arrangements for customers by reducing the amount of time between a retailer issuing an energisation/de-energisation request and the distributor actioning that request. This will be especially beneficial in 'move in/move out' situations.

**Draft policy position 12:** SCO proposes that the draft NECF be amended to include de-energisation notification requirements to require retailers to inform customers with smart meters that de-energisation of their electricity supply may occur remotely rather than manually.

**Further work:**

- SCO understands that the NSSC will review the appropriate checking mechanisms for remote de-energisations to ensure the correct premise is de-energised.

## **7. Retailer marketing through in-home displays (IHDs)**

The inclusion of a HAN interface in the smart meter National Minimum Functionality enables the use of in-home displays (IHDs), which is another means of communication between customers and their retailer (where agreed to). IHDs will range widely in functionality from simple traffic lights providing simple information to customers, to interactive colour screens. This more complex device has the potential to be another type of communication channel into the home which raises the question of whether any content regulation should apply.

The MCE has not included the IHD as part of the National Minimum Functionality, as maximising the benefits of this technology requires customers to be able to choose the display which best suits them from a wide range of offers. The MCE expects retailers to innovate and compete in this space and supports the inclusion of in-home displays in pilots and trials.

### **Potential customer protection issue**

The major customer protection issue raised is the consideration of the IHDs ability to enable advertising from retailers and/or third parties contracted by the retailer to be channelled into the home, and how this will be monitored. Retailers could consider both forms of marketing (retailer marketing or third party advertising) as a means of offsetting the cost of IHDs. Like television or internet advertising, customers would have the option of turning off their IHD but this would defeat the purpose of having it to monitor energy use.

### **Draft NECF provisions on retailer marketing through an in-home display**

The draft NECF does not include any express provisions on the requirements placed on retailers or third parties when it comes to the use of marketing through an IHD.

The draft NERR contains the National Energy Marketing Rules (the marketing rules) which retailers are bound by when conducting marketing activities. In their current form, the Rules only apply to retailers or their associates for marketing that may result in the formation of a retail contract. The marketing rules outline the obligations on retailers in areas such as information provision, record keeping, conduct standards and complaint resolution

In addition, the marketing rules note that parties must comply with general conduct standards contained in any applicable Commonwealth, State or Territory laws in relation to:

- Misleading, deception or unconscionable conduct
- Undue pressure, harassment or coercion; and
- The quality, form and content of marketing information.

### **SCO Consideration of retailer marketing through in-home displays**

SCO considers that the marketing rules that apply to retailers (or third parties acting on their behalf) when conducting marketing of their goods and services, will sufficiently cover any marketing conducted by retailers through an in-home display.

These rules place the same restrictions on IHDs that apply to marketing through other forms of media. SCO considers that the marketing rules, in addition to applicable Commonwealth, State and Territory laws (including the general conduct standards noted above), adequately cover any IHD marketing issues and recommends no further action in this area.

SCO has proposed in section 5 of this paper that the marketing rules be extended to include distributors as they may partake in direct marketing for services such as direct load control and supply capacity control. This would effectively cover any distributor advertising through an IHD.

Advice has been sought from the Australian Communications and Media Authority (ACMA) on how material other than retailer marketing, such as third party advertising, or provision of other material such as weather or news updates, would be regulated. This advice is reliant on the work of the NSSC in defining arrangements for the operation of the HAN. SCO will consider ACMA's advice once finalised.

**Draft policy response 13:** As proposed in draft policy response 11 SCO proposes that the National Energy Marketing Rules be extended to include distributors or third parties acting on behalf of distributors.

**Further work:**

- SCO will consider ACMA's advice on the regulation of third party material sent via an IHD, which will be informed by the NSSC's work on the HAN, to determine if any specific regulation is required.

## **8. Prepayment metering**

The remote energisation/de-energisation function of a smart meter combined with remote reading means prepayment metering may be possible without specialised equipment, therefore prepayment may be more likely to be offered by retailers in jurisdictions where it is allowed.

Smart meters may enable customers to sign up to a prepayment offer and the retailer to control electricity supply (through the distributor) according to the amount of credit the customer has. Smart meters should enable customers to switch more easily between prepayment and post payment contracts and vice versa. This differs to the current situation where prepayment requires a specific meter or physical add-on equipment.

### **Potential customer protection issue**

As with current prepayment provisions, the major customer protection issue relates to retailers recognising customer hardship and taking adequate steps to provide assistance. Other issues such as when de-energisation occurs and health and safety concerns continue to be relevant but do not change in nature from current arrangements.

### **Draft NECF provisions on prepayment**

The draft National Electricity Retail Law (NERL) considers prepayment metering to be any type of device, componentry, software or other mechanism that operates to permit the flow of energy through a meter when activated by a card, code or some other mechanism.

The draft NERR includes provisions related to prepayment, which will apply in jurisdictions which choose to permit pre-payment market contracts, and outlines the technical capabilities the prepayment meter system must be able to perform. Of particular relevance for smart meters is the requirement that the system must display:

- The financial balance of the prepayment meter system, accurate to within \$1.00 of the actual balance;
- Whether the prepayment system is operating in normal credit, or emergency credit mode; and
- Current consumption information.

The current minimum smart meter specifications only require that a meter's total consumption can be read by the customer. It is possible that the draft NECF requirements could be met by complementary products such as an IHD and/or functions performed by the retailer's back-office systems.

The following technical requirements are also relevant to smart meters:

- The system must only disconnect the supply of energy between the hours of 10am-3pm on a weekday and the system must also be capable of recommencing supply when a payment to the prepayment meter account has been made;

- The system should be capable of identifying self-disconnection by a customer; and
- The system must provide an amount of emergency credit.

The draft NECF includes specific provisions for hardship customers or customers who may be experiencing payment difficulties where a prepayment system is in place. As part of these provisions a retailer is required to offer to replace the prepayment meter system with a standard meter system and provide information on government funded energy charge rebate, concession or relief schemes where applicable.

The draft NECF also requires that retailers provide a customer, if requested, with information relating to their energy consumption at no charge.

### **SCO consideration of prepayment**

The draft NECF includes greater protections for prepayment customers because of the ease with which self-disconnection can occur. Smart meters are unlikely to change the situations under which prepayment customers come to be in hardship or the reasons for which some customers experience payment difficulties. On this basis, SCO considers the prepayment hardship provisions proposed in the draft NECF to be adequate.

SCO supports the prepayment meter system technical requirements in the draft NECF as they are important to ensuring customers are constantly able to know how much credit they have left and enable the retailer to identify incidents of self-disconnection and provide assistance where necessary. SCO understands that the NCC will consider these requirements in the development of operational specifications for smart meters.

Where these requirements are not able to be met within the meter itself it is expected that complementary devices should be provided by the retailer at no charge to the customer. Consideration should also be given to the ability of retailer back-office systems to meet technical requirements such as real time credit information. This approach aims to minimise the need to change meters where a customer takes up a prepayment offer.

Where a prepayment customer with a smart meter requests historical consumption information and that customer is on a time related tariff, the information should be provided according to tariff rate (e.g. peak, off-peak, shoulder). This proposal is discussed in chapter 3 of this paper.

**Draft policy position 14:** SCO does not propose any changes to prepayment provisions in the draft NECF at this stage.

## 9. Embedded generation

The MCE has supported a National Minimum Functionality for smart meters, including import/export meter functionality to support future embedded generation (e.g. photovoltaics) without changing the meter. The benefit was assessed as the avoidance of additional meter installation costs when an embedded generator is installed, while the cost was assessed as negligible since smart meters already provide half-hourly net metering.

### Potential customer protection issue

Concern has been raised over the legality of remotely disconnecting a meter where a photovoltaic (PV) system is installed. Where net metering is in place, de-energisation of supply to the meter would also remove the ability of the PV system to feed back into the grid and earn the owner a return on their generation. It was queried whether this could possibly constitute a restraint on trade under the *Trade Practices Act* (TPA). This is envisaged to be a rare occurrence and is not specific to smart meters.

Stakeholders have also raised concerns about the smart meter National Minimum Functionality, which mandates a single phase meter, and its ability to read and measure meter data to accommodate gross feed in tariff schemes currently operational (or soon to be) in one jurisdiction. Further discussion of this issue will be included in Draft Policy Paper Two, however SCO notes that the National Minimum Functionality is not intended to preclude businesses offering additional functionality to meet the needs of their customers.

### Draft NECF provisions on embedded generation

The Second Exposure Draft of the NECF is intended to outline a national framework for connection arrangements for customers and embedded generation to electricity distribution networks.

### SCO consideration of embedded generation

SCO's legal advice on this matter suggests that the restraint of trade doctrine (which is a common law doctrine, rather than a statutory provision of the Trade Practices Act) has no direct relevance for the circumstances in question, as any restriction on a user's capacity to feed electricity back into the distribution network following de-energisation will be exclusively regulated by the draft NECF statutory regime. Seeing that standard connection arrangements for embedded generation, which will include de-energisation provisions, are to be included in NECF it will take precedence over the common law doctrine of restraint of trade.

**Draft policy position 15:** SCO does not propose any changes to the draft NECF in relation to de-energisation where an embedded generation system is in place.

## Appendix A - Summary of draft policy positions

**Draft policy position 1:** SCO does not propose any smart meter-related changes to the draft NECF hardship provisions at this stage.

**Draft policy position 2:** SCO proposes that all customers with smart meters should be able to check that their meter is working correctly, and reconcile their bills against their meter with a reasonable degree of certainty.

**Draft policy position 3:** SCO proposes that retailers provide customers on time related tariffs with consumption data for each tariff segment (e.g. peak, off-peak, shoulder) on their bill to enable them to reconcile their bill charges.

**Draft policy position 4:** SCO proposes in situations where meter data is permanently lost in a DPP event that substitutions not be based on historical data. SCO proposes that customers should be charged for estimated electricity consumed at a non-DPP price.

**Draft policy position 6:** SCO proposes that retailers be required to inform customers with smart meters of the scope of any estimation on their bill.

**Draft policy position 7:** As proposed in draft policy position 3, SCO proposes that retailers provide customers on a time-related tariff with consumption data for each segment rate (e.g. peak, off-peak, shoulder) on their bill.

**Draft policy position 8:** SCO proposes that the draft NECF define 'historical billing data' so that it is clear that retailers must be able to provide:

- the full set of metering data on which the bill was based; and
- a summary of the meter data on which the bill was based.

SCO proposes that it be at the customer's discretion as to which of these levels of detail they require.

**Draft policy position 9:** SCO does not propose any changes to the draft NECF at this stage to regulate direct load control.

**Draft policy position 10:** SCO does not propose any changes to the draft NECF related to interruption of supply at this stage to regulate involuntary use of supply capacity control to manage emergency situations.

**Draft policy position 11:** SCO proposes that the National Energy Marketing Rules be extended to include distributors or third parties acting on behalf of distributors.

**Draft policy response 13:** As proposed in draft policy response 11 SCO proposes that the National Energy Marketing Rules be extended to include distributors or third parties acting on behalf of distributors.

**Draft policy position 14:** SCO does not propose any changes to prepayment provisions in the draft NECF at this stage.

**Draft policy position 15:** SCO does not propose any changes to the draft NECF in relation to de-energisation where an embedded generation system is in place.