

REVIEW

Australian Energy Market Commission

DRAFT SPECIFICATIONS

Power of choice – giving consumers options in
the way they use electricity

30 November 2012

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About the AEMC

The Council of Australian Governments (COAG), through its then Ministerial Council on Energy (MCE), established the Australian Energy Market Commission (AEMC) in July 2005. In June 2011, COAG established the Standing Council on Energy and Resources (SCER) to replace the MCE. The AEMC has two principal functions. We make and amend the national electricity, gas and energy retail rules, and we conduct independent reviews of the energy markets for the SCER.

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Draft specifications

The purpose of the draft specifications is to explain in detail the regulatory requirements to bring into effect the recommendations in the final report that require a rule change. The draft specifications do not constitute a draft rule, and should not be interpreted as such. Rather, the draft specifications provide the framework for developing draft rules.

Where possible the draft specifications detail which regulatory framework will need to be amended, such as the National Electricity Rules (NER) and the National Energy Retail Rules (NERR).

The document is presented in two parts:

- **Sections 1 to 5** outline the draft specifications for recommendations made in the final report that require a rule change. These include draft specifications for access to data, metering, demand forecasting, flexible pricing options and network incentives.
- **Section 6** provides the terms of reference and draft specifications for AEMO to develop rule change proposals for the demand response mechanism and new category of market participant.

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1 Strengthening rules for consumers to access and receive electricity consumption data

Objective: Clarifying the existing rules regarding the requirements on a retailer (FRMP) for when consumers request access to their personal energy and metering data. This will be achieved by providing a new transparent framework in Chapter 7 of the NER. This framework is to include:

- minimum format and standard information that would need to be provided to consumers by retailers (or other parties);
- response timeframes for delivery of data to consumers;
- ability for a consumer's agent to access energy and metering data directly from the consumer's retailer (this would be in accordance appropriate explicit informed consent arrangements); and
- clarity of fees that are able to be charged by the retailer (or other party).

New provisions are also to be included in the NERR to provide each residential and small business consumer with their consumption load profile (that is, timing of use over a period). This is to enable consumers to identify consumption patterns and better link consumption to costs.

The specifications are not draft rules and should not be interpreted as such.

Application: Proposed rule change to replace relevant clause Chapter 7.7 (a) of the NER and new clauses in the NERR.

Definitions

The existing definition for energy and metering data has been used. For clarity, metering data is defined as the data recorded by a consumer's meter, retrieved from that meter, and then validated through NEM processes and systems for market settlement and retail billing.

Principles

In considering the proposed framework that should apply to Chapter 7 of the NER, the following key principles should be considered:

- All consumers have the right to access their personal energy and metering data. They should know the data exists, be able to share it, and know how it will be used (in accordance with explicit informed consent, privacy and confidentiality provisions).
- All consumers should be able to access and receive their raw historical and current energy and metering data that is validated through AEMO processes for

market settlement. As discussed, the level of data available to consumers will depend on the type of meter they have.

- The information given to consumers should be in a form that enables them to understand their consumption patterns. Such information should have regard to different consumer sectors and capacities within those sectors (i.e. industrial, commercial and residential/small business consumers). Such information is important because it enables consumers to consider the impacts of their consumption, how potential changes to that consumption relates to costs, choose pricing offers that may reduce their electricity bill, and take up other demand side participation options available.
- Response to consumer requests to their data should be in a timely manner.
- All consumers should be able to access their energy and metering in the standard format data free of charge. This is consistent with the existing principles applied under the NECF and current practice by retailers.
- Consumers should be able to authorise third parties to access data on their behalf. Transfer of energy and metering data to consumers' agents should be in accordance with explicit informed consent arrangements, having regard to data security and protection of consumer privacy.
- The requirements should not limit the delivery of more detailed information to consumers by retailers or other third parties. This is particularly relevant in the case for large industrial and commercial consumers who currently have direct relationships with distribution businesses and metering data providers.

Propose new arrangements:

1. **Framework in the NER to support consumer requests for energy and metering data**
 - (a) Change the existing clauses in chapter 7.7 (a) to provide new clauses that require retailers (i.e. FRMP) to:
 - To provide all consumers, where requested, with their raw energy and metering data in a standard format in accordance with the procedures that are developed by AEMO (see (b) and (c)).
 - Where consumers do not require their full set of raw data, provide summary data in accordance with procedures that are developed by AEMO (see (b) and (c)).
 - Respond to consumers request for their energy and metering data in accordance with the timeframes as set out in the procedures developed by AEMO (see (b) and (c)).
 - (b) AEMO must develop and publish procedures that outline the specifications for the format that retailers (and other parties) are to use when providing

consumers (or their agents) with their personal energy and metering data. The procedures must include specification for provision of:

- raw energy and metering data; and
- summary data and information.

(c) In developing the procedures and standard specifications, AEMO must:

- (i) Consult with market participants and such other persons as AEMO thinks appropriate, in accordance with the NER consultation procedures.
- (ii) Have regard to the differences between residential/small business and industrial/commercial consumers for provision of a standard format of summary data. The minimum standard of format should be simple and practical for consumers to use, and not unduly restrictive.
- (iii) Have regard to the “NEM 12” data/CSV format that is currently used for the exchange of data for market settlement purposes as a suitable standard format and approach for provision of raw energy and metering data to consumers.
- (iv) Ensure that residential and small business consumers that have interval/smart meters, the standard summary format of information shows how consumption use varies across different time periods (for example, across peak, off peak, and shoulder periods). At a minimum, summary information should include:
 - Consumption load profile (i.e. monthly total electricity consumption of the consumer); and
 - A chart (figure) showing peak, off-peak and shoulder electricity consumption over a specified period (e.g. one month, six months etc.).
- (v) Ensure that residential and small business consumers that have accumulation meters, summary information enables the net system load profile of their distribution area to be provided.
- (vi) Ensure that the procedures set out the timeframes for retailers (or other parties) to respond to a consumer’s request. The timeframes should take account of AEMO’s validation processes and protocols, however a maximum day limit of 10 days should be considered.
- (vii) Ensure that delivery method for provision of the data and summary information (i.e. e-mail, internet web portal or hard copy). It is important to ensure the arrangements are flexible to allow any approach the consumer chooses and innovation.

2. **Fees payable by a consumer (or agent)**

- (a) Change the rules so that it is clear when retailers (or other parties) are able to charge a consumer for the providing energy and/or metering data. The rules should be clarified so that they reflect:
 - (i) Requests by a consumer for their energy and metering data in accordance with minimum standard format are supplied at no cost to the consumer.
 - (ii) Where consumers (or their agents) request information more than once per billing period over a twelve month period; a retailer (responsible party) is able to charge a reasonable fee. The reasonable fee should be specified in the rules.
 - (iii) Additional data services provided by retailer (or other party) should be specified and as with the reasonable fee can be applied.

3. **Provision of consumption load profile information to consumers**

- (a) Retailers (FRMP) must provide all residential and small business consumers with their consumption load profile information. For those consumers with interval/smart meters, retailers should be able to utilise either bill or their web portals if available.
- (b) Retailers, where the consumer has an accumulation meter, must provide that consumer with the net system load profile of their distribution area. As a minimum, this information should be provided on a consumer's bill.

4. **Issues to consider**

- Consideration of whether third parties accessing consumers data will require accreditation if NECF arrangements are changed for delivery of energy services.
- Consideration of the outcomes of the SCER Smart Meter, Consumer Protection and Safety program, and also reforms to metering adopted by SCER.

2 Enabling technologies - metering

Objective: The purpose of these specifications is to explain in detail the regulatory requirements for metering, which were developed in the electric vehicle and power of choice reviews.

Scope: Whilst these specifications were developed during power of choice and electric vehicle reviews and initially prepared for small customers as defined by the NECF (residential and small business consumers), they are recommended for general application across all parts of the NEM.

This draft specification is divided into the following three parts:

1. Role of the responsible person and Metering Coordinator
2. Metering installation minimum functionality specification
3. Communications infrastructure platform for remote access to a metering installation

Definitions

Existing definitions in the Rules have been italicised in these specifications. In addition, a number of proposed new terms for metering have also been italicised. Outlined below are the new terms and their definitions that have been included in these specifications.

Connection Point [change to read]:

The agreed point of supply established between a *network*, which is connected to part of the *national grid*, and:

- another Registered Participant's *network*;
- a *network* exempt by the AER or by the *Rules* that would otherwise be required to be registered with AEMO; or
- the circuits of a *Non-Registered Customer* or *franchise customer*.

DUOS means distribution use of *system*.

FRMP means *financially responsible Market Participant*.

LNSP means *local Network Service Provider*.

Minimum functionality specification

The functionality of a metering installation as recorded in Section C of this specification and to be subsequently specified in rule 7.3.1(a) of the *Rules*.

Settlements point

The agreed point of *supply* established at a *connection point* between a *financially responsible Market Participant and Non-Registered Customer or franchise customer*.

Electric Vehicles Review

The AEMC undertook the Energy Market Arrangements for Electric and Natural Gas Vehicle Review in parallel with the Power of Choice - Stage 3 DSP Review. The Electric Vehicles Review considered issues related to multiple FRMPs at a single consumer's premises and metering for embedded networks. The relevant aspects of the EV contestable model for contestable metering arrangements are:

1. Changing the definition of *connection point* to refer to "points of connection" rather than "points of supply".
2. Defining *settlements point* to refer to point of supply established at a consumer's premises that is associated part of all of a consumers load or generation at that premises.
3. The ability for a *connection point* to have more than one *FRMP*, providing each *FRMP* is assigned to a unique *settlements point*.
4. The ability to use each measurement element of a multi-element *meter* as a separate *settlements point*.
5. Formally recognising an *embedded network* where more than one consumer is supplied by that *network* and providing Chapter 7 provisions for *metering installations* and its related *metering data* in this type of network.
6. Formally recognising that the premise of a single consumer premise does not form an *embedded network* and providing Chapter 7 provisions for *metering installations* and its related *metering data* at this type of premise.

The recommendations in the Electric Vehicles Review were considered in the context of the metering arrangements that may be necessary to increase the flexibility for electric vehicles. However, the same arrangements also increase the flexibility of metering arrangements for various demand side options.

Principles that apply to the contestable metering approach

The Power of Choice and Electric Vehicle reviews found that contestable arrangements in the *National Electricity Market (NEM)* were more likely to achieve efficient DSP than regulatory arrangements. Based on this finding, these specifications have been prepared in accordance with the following principles:

1. These rules apply generally across the NEM.
2. The existing rules in Chapter 7 remain unless altered by the intent of these rules.

3. No party had an exclusive right to be responsible for the coordination of metering services.
4. The term *responsible person* was not consumer friendly and would be changed to *Metering Coordinator*.
5. Any person can register and be accredited to perform the role of *Metering Coordinator*.
6. A *FRMP* must engage a *Metering Coordinator* on behalf of a consumer for the provision of metering services to a *settlements point* unless otherwise requested by a consumer.
7. A consumer can directly engage a *Metering Coordinator* for the provision of metering services.
8. A *Metering Coordinator's* metering service charge is to be based on commercial considerations. The metering service charge is to be regulated only in the situation of existing meters and where a *LNSP* decides to upgrade a consumer's *meter* to the *minimum functionality specification* as part of an approved regulatory rollout of those *meters*.
9. A *metering installation* must meet the *minimum functionality specification* where a new *settlements point* is established, the *meter* is changed, or where an appliance is connected to an existing *settlements point* and that appliance has the potential to, or does, inject electricity into that *settlements point*.
10. The remote acquisition function in the *minimum functionality specification* must be configured to enable open access to the *energy data* held in the meter.
11. Communication infrastructure to the meter must support competition in *metering data providers*, and in this respect must provide open access at least to *energy data* in the *meter*.
12. These rules will not impact the intent of any existing metering related derogations specified in Chapter 9 of the *Rules*.

Part 1 - Role of the responsible person and Metering Coordinator

Objective: The purpose of these rules is to clarify the future role of the person who will be financially liable for the metrology at a *settlements point*.

Introduction

In the current version of the *Rules*, the person who is responsible for the metrology at a *connection point* is known as the *responsible person*. This person is financially liable for the accuracy of the *metering installation*, if it is found to be in error, and the integrity of the data that is (a) extracted from the *metering installation*, (b) processed and (c) delivered to nominated NEM stakeholders to allow those stakeholders to undertake billing processes. However, the people who could perform this role were limited to the *FRMP* or the *LNSP*, depending on certain conditions. Hence, financial liability for the integrity of the measurement of the flow of electricity at a *connection point* and the transmittal of that measurement to nominated NEM stakeholders was assigned to a *Registered Participant* under the *Rules*.

The changes being introduced in the Power of Choice Review warrant a review of all aspects of the *responsible person* role, firstly because this person will have a new interface with the consumer, and secondly due to the multiple *settlements points* and *FRMPs* at any one *connection point* that these rules enable. The term *responsible person* is not consumer friendly and should be changed to a term that is more intuitive for the consumer.

These changes adopt the overarching principle that no party has an exclusive right to be responsible for the coordination of metering services. They apply to *metering installations* types 1 to 7 in accordance with the context of each rule.

The following paragraphs explain the changes recommended in regard to the future role of the *responsible person* and are to be read in conjunction with this metering specification as a whole.

A - The term responsible person to be changed to Metering Coordinator

1. The term *responsible person* is to be replaced by the term *Metering Coordinator* in the *Rules*. For the removal of doubt, a party who is registered in the role of *responsible person* before these *Rules* commenced must be registered by AEMO in the role of *Metering Coordinator* at the commencement of these *Rules*, and is to continue in that role for each assigned *metering installation* until either a new *Metering Coordinator* is appointed in accordance with these *Rules* or the party transfers its *Metering Coordinator* role to another *Metering Coordinator*.
2. The term *Metering Coordinator* will be defined in an identical manner to the *responsible person*, being: the *Metering Coordinator* is the person responsible for, in accordance with this Chapter 7, the *metrology procedure* and procedures authorised under the *Rules*, the:
 1. provision, installation and maintenance of a *metering installation*; and

2. collection of *metering data* from each *metering installation* for which it is responsible, the processing of that data and the delivery of the processed data to the *metering database* and to parties entitled to that data under rule 7.7(a), except as otherwise specified in clause 7.2.1A(a).
3. Rule 7.2.1A(a) would be altered to the extent that the term *responsible person* was replaced by the term *Metering Coordinator*.
4. The term *responsible person* is to be removed from the *Rules Glossary*.
5. For the removal of doubt, the *Metering Coordinator* is financially liable for the accuracy of the *metering installation*, the integrity of the *metering data* and its delivery to NEM stakeholders.

B - Clarification of a Metering Coordinator

1. The *Metering Coordinator* will be responsible for the current provisions contained in Chapter 7, where they are retained, as well as the new provision contained in this specification. These responsibilities include the following key requirements:
 - (a) Ensuring that a *settlements point* has and maintains a *Rules* complaint *metering installation* and a *NMI* when requested to do so by a *FRMP*.
 - (b) Identifying the features of the equipment to be included in the *metering installation* in accordance with the requirements of the *FRMP*, on behalf of the consumer, or the needs of the consumer.
 - (c) Engaging and coordinating the availability, dispatch and performance of the *Metering Provider* and the *Metering Data Provider*, whose roles have not changed by these rules, to ensure that *metering data* is provided to stakeholders in accordance with agreed quantities, quality and timeliness.
 - (d) Paying the *Metering Provider* and the *Metering Data Provider* for the services performed.
 - (e) Entering into commercial agreements (based on standard contract terms and conditions) for the provision of metering services with the *FRMP*, on behalf of the consumer, or directly with the consumer, with the aim of providing the consumer and the *FRMP* with long term stability of the *metering installation* and associated equipment.
2. Any person may become a *Metering Coordinator*. Prior to becoming a *Metering Coordinator*, the person must register with and be accredited by *AEMO* for that role to ensure compliance with the *Rules*.
3. For the removal of doubt, a *FRMP* may be a *Metering Coordinator*.
4. The key principles that are to be included in standard terms and conditions of a commercial agreement between a *Metering Coordinator* and a *FRMP* or a consumer will be regulated.

5. The assignment of a *Metering Coordinator* to a *metering installation* is a commercial arrangement enacted by either a *FRMP* or a consumer in accordance with these rules. No party may gain or retain exclusivity for the provision of *metering installations* or the provision of *metering data* services when performing the role of the *Metering Coordinator*.
6. For the removal of doubt, a *Metering Coordinator* may also be accredited as a *Metering Provider* and/or a *Metering Data Provider*.
7. The *Metering Coordinator* may assign its responsibility under the *Rules* and the commercial agreement to another *Metering Coordinator* on the provision that no change is made to the commercial arrangements in place with the *FRMP* or the consumer other than the change in *Metering Coordinator*, and only after advising the counterparty to the existing agreement of the change.

C - Clarification of the relationship between the FRMP and the Metering Coordinator

1. The *FRMP* is responsible for engaging the *Metering Coordinator* on behalf of the consumer if a consumer has not otherwise engaged a *Metering Coordinator*, or allowing a consumer to engage a new *Metering Coordinator* if the consumer so chooses.
2. The *Metering Coordinator* must inform the *FRMP* of the *minimum functionality specification* and the circumstances when the *metering installation* must be upgraded to meet that functionality.
3. Subject to E.1 and E.2 (below), a *FRMP* at a single-element *meter* may request the *Metering Coordinator* for the associated *metering installation* to change the features of that *metering installation*, providing the resulting *metering installation* meets or exceeds the *minimum functionality specification* and the explicit informed consent of the customer is obtained. In this situation:
 - (a) the *Metering Coordinator* must recover the cost of the change to the *metering installation* directly from the consumer's *FRMP* unless the consumer enters into a commercial agreement with the *Metering Coordinator* to make direct payments to the *Metering Coordinator*;
 - (b) if the *Metering Coordinator* recovers the cost from the consumer's *FRMP*, the *FRMP* may pass that cost on to the consumer. If the *FRMP* adds a handling fee to the *Metering Coordinator's* cost, the *FRMP* must separately itemise the *Metering Coordinator's* cost and the handling fee on the *FRMP* invoice received by the consumer; and
 - (c) the consumer will not be liable to the *FRMP* for any interruption to the *load* that occurs if the *meter* is replaced.
4. Subject to E.1 and E.2 (below), a *FRMP* at a multi-element *meter* may request the *Metering Coordinator* for the associated *metering installation* to change the features

of that *metering installation*, providing the resulting *metering installation* meets or exceeds the *minimum functionality specification* and the explicit informed consent of the customer is obtained. In this situation:

- (a) the *FRMP* requesting the change must inform any other *FRMPs* associated with that multi-element *meter* of the decision to change the features of that *meter*, and must negotiate those features with the affected *FRMPs*. All parties must negotiate in good faith. In the situation where a feature that is being used by one *FRMP* is to be removed or modified so that it no longer performs its expected function, the requesting *FRMP* must compensate the affected *FRMPs* to change or remove that feature in accordance with the negotiated outcome;
 - (b) the consumer is only liable to pay for the cost associated with the change of feature(s) to the *metering installation* if it had agreed to this payment in providing its explicit informed consent to the *FRMP* seeking the change;
 - (c) the *Metering Coordinator* must recover the cost of the change to the *metering installation* directly from the consumer's multiple *FRMPs* in equal proportions unless the consumer had agreed to pay for the changes and enters into a commercial agreement with the *Metering Coordinator* to make direct payments to the *Metering Coordinator*, in which case the other multiple *FRMPs* must be informed of that arrangement by the *Metering Coordinator*;
 - (d) if the *Metering Coordinator* recovers the cost directly from the consumer's *FRMPs*, the *FRMPs* may pass that cost on to the consumer. If the *FRMP* adds a handling fee to the *Metering Coordinator's* cost, the *FRMP* must separately itemise the *Metering Coordinator's* cost and the handling fee on the *FRMP* invoice received by the consumer;
 - (e) the consumer will not be liable to any *FRMP* for any interruption to *load* that occurs if the multiple element *meter* is replaced; and
 - (f) the *FRMP* requesting the change to the *metering installation* will not be liable to any other *FRMP* at that multi-element meter for any interruption to *load* that occurs if the multi-element *meter* is replaced.
5. If the *FRMP* chooses to upgrade the *metering installation* to the *minimum functionality specification* and the *DNSP* is the *Metering Coordinator* then the *FRMP* must:
- (a) adequately inform the consumer of the change in writing; and
 - (b) set the *retail tariff* (which consists of the combined energy and *DUOS tariffs*) after the change to a value that is not higher than the *retail tariff* prior to the change less the new metering services charge.

6. If a *FRMP* requires an alteration or upgrade of a *metering installation*, it must inform the consumer and the *Metering Coordinator* of that requirement within a reasonable period prior to undertaking that alteration or upgrade.
7. A *FRMP* must not block a request by a consumer to upgrade a *meter* within its *metering installation*.
8. A consumer must not block a *FRMP* from upgrading a *meter* in a *metering installation* to the *minimum functionality specification*.
9. If a *FRMP* requests to upgrade a *metering installation* and this upgrade results in the breaching of existing contract conditions with the *Metering Coordinator* (or with the consumer or other *FRMPs* and the *Metering Coordinator*) associated with a multi-element *meter*, then that *FRMP* may be liable to compensate the *Metering Coordinator* or those *FRMPs* or consumer. For the removal of doubt, liability to compensate would not be available if the parties agreed otherwise prior to the upgrade.
10. The *FRMP* requesting an upgrade of a *meter* in a *metering installation* to the *minimum functionality specification* must bear all the costs associated with the upgrade and can recover these costs from the consumer in a transparent manner, subject to the provision of C.5(b).
11. The *FRMP* is responsible for paying the *Metering Coordinator* in accordance with the commercial agreement entered into by those parties.
12. At any one *connection point*, a *FRMP* must ensure that the *Metering Coordinator's* charge at a *settlements point* is separately identifiable in the consumer's bill from the *load* and other charges at that *settlements point*.
13. The *FRMP* is responsible for respecting any metering services agreement entered into between the *Metering Coordinator* and the consumer.
14. The *FRMP* may change a *Metering Coordinator* at any time, but this change must be subject to the explicit informed consent of the consumer where the consumer has entered into a metering services contract with a *Metering Coordinator* and any commercial arrangements which may include fair and reasonable exit fees or regulatory arrangements if the *Metering Coordinator* is a *DNISP*.

D - Clarification of the relationship between the consumer and the Metering Coordinator

1. The consumer may enter into an agreement directly with a *Metering Coordinator* for the provision of metering services which must include the requirement that the *Metering Coordinator* ensures a *metering installation* is installed and maintained, *metering data* is collected, processed and delivered to NEM stakeholders, and the *FRMP* is advised of the agreement. If the *LNISP* is the *Metering Coordinator* then the *LNISP* must advise the consumer of the existing metering services fee.

2. The *Metering Coordinator* must inform the consumer of the *minimum functionality specification* and the circumstances when the *metering installation* must be upgraded to meet that functionality.
3. A consumer at a single-element *meter* may request the *Metering Coordinator* (who may or may not be the *FRMP* for one of its *metering installations*) to change the features of that *metering installation*, providing the resulting *metering installation* meets or exceeds the *minimum functionality specification*. In this situation:
 - (a) The *Metering Coordinator* (if not the *FRMP*) must inform the *FRMP* of the decision to change the features of the *meter*. Neither the *Metering Coordinator* nor the consumer has a general obligation to negotiate those features with the *FRMP*, except in the situation where a feature that is being used by the *FRMP* is to be removed or modified so that it no longer performs its expected function, in which case the consumer or the *Metering Coordinator* on behalf of the consumer, must negotiate in good faith to change or remove that feature with the affected *FRMP*.
4. A consumer at a multi-element *meter* may request the *Metering Coordinator* for one of its multi-element *metering installations* to change the features of that *metering installation*, providing the resulting *metering installation* meets or exceeds the *minimum functionality specification*. In this situation:
 - (a) the *Metering Coordinator* must inform the relevant *FRMPs* associated with the multi-element *meter* of the change to the *metering installation* within a reasonable period prior to making the change;
 - (b) the *Metering Coordinator* must recover the cost of the change to the *metering installation* directly from the consumer; and
 - (c) the consumer will not be liable to any *FRMP* for any interruption to the *load* that occurs if the multi-element *meter* is replaced.
5. If a consumer requires an alteration or upgrade of a *metering installation*, it must inform the *Metering Coordinator* and the *FRMP* of that requirement within a reasonable period prior to undertaking that alteration or upgrade.
6. A *Metering Coordinator* must not block a request by a consumer to upgrade a *meter* within its *metering installation*.
7. A consumer must not prevent a *Metering Coordinator* from upgrading a *meter* in a *metering installation* on behalf of the *FRMP*.
8. If a consumer requests to upgrade its *metering installation* and this upgrade results in the breaching of existing contract conditions with other *FRMPs* or the *Metering Coordinator* associated with a multi-element *meter* then that consumer may be liable to compensate those *FRMPs* or *Metering Coordinator*. For the removal of doubt, liability to compensate would not be available if the parties agreed otherwise prior to the upgrade.

9. The consumer must pay the *Metering Coordinator* in accordance with the commercial arrangements established in the agreement.
10. The consumer may change a *Metering Coordinator* at any time, subject to commercial arrangements which may include fair and reasonable exit fees, or regulatory arrangements if the *Metering Coordinator* is a *DN*SP.

E - Clarification of the relationship between the FRMP and the consumer in regard to metering services

1. The *FRMP* may request a *Metering Coordinator* to include features in a *metering installation* that upgrade the *metering installation* to the *minimum functionality specification* without the explicit informed consent of the consumer, but with the knowledge of the consumer.
2. The *FRMP* may only request a *Metering Coordinator* to include advanced features in a *metering installation* that upgrade the metering installation beyond that required by the *minimum functionality specification* with the explicit informed consent of the consumer. In this situation:
 - (a) The *FRMP* must obtain more than one offer from *Metering Coordinators* for the upgrade;
 - (b) if the *LN*SP is the *Metering Coordinator* then the *LN*SP must provide the *FRMP* with a commercial offer for upgrading the *metering installation* to include the advanced features;
 - (c) the *FRMP* must inform the consumer of the offers received, the recommended offer and its impact on the future metering services charge, and obtain the consumer's explicit informed consent prior to accepting one of the offers.
3. The consumer may request the *FRMP* to upgrade its associated *metering installation* to the *minimum functionality specification* or include advanced features in a *metering installation* that upgrade the *metering installation* beyond that required by the *minimum functionality specification* in which case the *FRMP* must comply with the consumer's request, and manage that request, including providing the consumer with offers from more than one *Metering Coordinator* for the provision of those features. In this situation:
 - (a) the *Metering Coordinator* must recover the cost of the change to the *metering installation* directly from the consumer's *FRMP* (or *FRMPs* in the case of a multi-element meter); and
 - (b) the *FRMP* may pass that cost on to the consumer. If the *FRMP* adds a handling fee to the *Metering Coordinator's* cost, the *FRMP* must separately itemise the *Metering Coordinator's* cost and the handling fee on the *FRMP* invoice received by the consumer.

4. For the removal of doubt, an upgrade of a *metering installation* requested by a *FRMP* or a consumer beyond the *minimum functionality specification* may require the commercial arrangements between the parties to be revised.

F - Clarification of the application of the DUOS tariff and exit fee in relation to metering services

1. From the date this rule commences the *LNSP* must unbundle the metering charges for any *meters* included in its regulatory asset base from its *DUOS tariff*.
2. If the existing *Metering Coordinator* is a *DNSP* and the *FRMP* or consumer (as the case may be) changes to a new *Metering Coordinator*, the *DNSP* may recover an exit fee as determined by the AER for that *DNSP*. In this situation:
 - (a) the AER must consider the following criteria when making an exit fee determination:
 - (i) the fee must be reasonable;
 - (ii) the fee should be based on the average asset life of the existing *meter* and operating costs and must be reasonable wherever possible;
 - (iii) the fee may include reasonable costs of processing the consumer transfer to another *Metering Coordinator*;
 - (iv) the fee can't be more than three times the existing annual metering charge;
 - (v) the exit fee for the type 5 *metering installation* may differ from the exit fee for the type 6 *metering installation*;
 - (vi) the exit fee for a type 5 *metering installation* that was installed post 1 July 2013 (irrespective of when these rules commence) must not be determined by the AER and can't be recovered by the *DNSP*;
 - (vii) the exit fee for a type 6 *metering installation* that was installed post 1 July 2013 (irrespective of when these rules commence) must not be determined by the AER and can't be recovered by the *DNSP*.
 - (b) the *DNSP* must remove the cost of that *metering installation* from its asset base and reduce the *DUOS* charge to that consumer by the total impact on the metering service that was provided by the *DNSP*.

G - Clarification of the arrangements for a regulatory roll-out of meters

1. The *LNSP* may make arrangements to upgrade the *metering installations* of the consumers in its *local area* to the *minimum functionality specification*, subject to approval of the pricing of those upgrades by the AER ('AER approval'). In this situation, the *LNSP* is not required to obtain the consent of the consumer or the *FRMP* but must inform both parties of the intent to make the change not more

than 3 months and not less than 1 month prior to the change being made ('notice of upgrade').

2. In obtaining AER approval, the following principles are to apply:
 - (a) The *LNSP's* submission to the *AER* must be part of the 5 year regulatory determination, to enable the *AER* to assess the roll-out proposal as part of the package of investment proposals;
 - (b) The *AER* is to assess the submission in accordance with normal incentive regulation arrangements, and in addition the *AER* must:
 - (i) consider a "revenue driver adjustment" to remove any timing benefit from delaying the proposed roll-out schedule (see 2010 smart meter cost recovery final report); and
 - (ii) consider the possible exclusion of depreciation from the capital incentive scheme;
 - (iii) use RIT-D as the basis for the cost benefit analysis. The *AER* may use information from pilots and trials projects in estimating the benefits and costs. The *LNSP* must provide sufficient data & results to adequately inform the *AER*, including the costs of commercial smart meters provision and data services, the likely penetration of *meters* in that area under the contestability arrangements, and the number of *meters* with *minimum functionality specification* installed in their *local area*.
 - (c) The *AER* in approving the *LNSP* roll-out proposal must:
 - (i) consider whether the *LNSP* is able to earn a share of any non-network market benefits;
 - (ii) determine the minimum number of *meters* the *LNSP* must target in its *local area* roll-out for the submission under consideration;
 - (iii) determine a metering service charge that is separate to any other determination contained within or associated with the submission;
 - (iv) determine a change-over fee for various makes of meters that the *LNSP* as *Metering Coordinator* would replace during the roll-out.
 - (d) The *LNSP* must notify all *Market Customers* who have retail licences for their jurisdiction of their intention to rollout *meters* with *minimum functionality specification*. The *LNSP* is to provide these *Market Customers* with have the opportunity to comment on the *LNSP* rollout proposal as part of the consultation on the *distribution determination*.
 - (e) The *LNSP* must not change a *metering installation* that has been already upgraded to the *minimum functionality specification*.

- (f) Separate to the actions associate with the *LNSP's* submission, the *AER* assessment and determination, and the approvals granted by the *AER* to the *LNSP*, a retail licenced *Market Customer* may upgrade a *meter* to the *minimum functionality specification* at a *settlements point* if it has explicit informed consent from the consumer prior to the customer receiving the notice of upgrade from the *LNSP*.
- (g) The *LNSP* funding model can be based on their role as the *Metering Coordinator* for the consumer's *settlements points*, or by direct offer to the *Metering Coordinator* already established for the consumer's *metering installations*. For the removal of doubt, the *FRMP* may seek to change the *Metering Coordinator* at the settlement's point and to engage the *LNSP* as the *Metering Coordinator*.
- (h) The *LNSP* metering services agreement must be subject to standard terms and conditions, which must include at the least the quality of the service to be provided, and a complaints handling arrangement.
- (i) The *AER's* approval does not give the *LNSP* an exclusive right to roll-out meter upgrades in its *local area*.

H - Clarification of metering service fees when a metering installation is upgraded

1. A *metering installation* may be upgraded at any time, with those changes (including any changeover fees) reflected in the agreements in place between the affected parties, unless one party is a *LNSP*.
2. If one party to the agreement in paragraph H.1 is a *LNSP* and that party had commenced recovering the cost of the *metering installation* (or parts of that installation) from the regulated tariff approved by the *AER* prior to the upgrade, a new metering service fee may be recovered by the *LNSP* from the requesting party based on commercial consideration, along with an exit fee as separately determined by a submission to the *AER*.
 - (a) For the removal of doubt, if the *LNSP* continues to be the *Metering Coordinator* for the *metering installation* once the upgrade has been completed, the *LNSP* must establish a new commercial agreement with the requesting party for the metering services provided at the *settlements point*.
3. An upgrade of a *metering installation* may include a reclassification of that *metering installation* type.
 - (a) For the removal of doubt a reclassification of a *metering installation* occurs when it is eligible to be a different volume type as specified in Table S7.2.3.1 of the *Rules* to the type registered in *metering register*.

I - Loss of accreditation for Metering Coordinator, Metering Provider or Metering Data Provider

1. A *Metering Coordinator, Metering Provider or Metering Data Provider* will automatically lose its accreditation if it is placed in receivership.
2. Any *metering installation* components owned by the *Metering Coordinator, Metering Provider or Metering Data Provider* at the time of declaring receivership must remain available for operational use by other *Metering Coordinators, Metering Provider and/or Metering Data Provider* (as the case may be) and AEMO until alternative arrangements for a handover of those components are made by the Receiver.
3. The FRMP at the *settlements point* that is the subject of a declaration of receivership for a *Metering Coordinator* must arrange for another *Metering Coordinator* to be appointed in place of the former party, or must ensure that the consumer has arranged for another *Metering Coordinator* to be appointed without undue delay, depending on the commercial arrangements in place prior to the declaration of receivership.
4. The *Metering Coordinator* at the *metering installation* that is the subject of a declaration of receivership of a *Metering Provider* or a *Metering Data Provider* must arrange for another *Metering Provider* or a *Metering Data Provider* to be appointed without undue delay.

J - Loss of accreditation for Metering Coordinator, Metering Provider or Metering Data Provider

1. These rules will not impact the intent of any existing metering related derogations specified in Chapter 9 of the *Rules* to the extent that reduces their relevance.
2. Jurisdictional Ministers who have made these derogations will be encouraged to review them in the light of these rule changes.

Part 2 - Metering installation minimum functionality specification

Objective: The purpose of these rules is to specify the *minimum functionality specification* of a *meter* in a *metering installation* and specific requirements related to that functionality. All new, refurbished and replacement *meters* or *metering installations* (as the case may be) must meeting this *minimum functionality specification*.

Background

The *minimum functionality specification* contains functions that support:

- the basic metrology requirements for the measurement of electricity at a *settlements point*;
- the *distribution network service providers* in the management of their regulated responsibilities;
- the *Metering Provider* in its remote management of the *meter*;
- the *FRMP* in the fulfilment of their relationship with the consumer;
- the consumer in its desire to obtain a favourable buying experience;
- all parties in their interest in DSP;
- security requirements when establishing and operating a communications network that is connected to the *meter*;
- messaging requirements for sending instructions to, or relaying content through, a *meter*; and
- interoperability arrangements that are to be considered when suitable industry standards are established.

The *minimum functionality specification* adopts all the functions endorsed by the MCE/SCER as contained in the document “SMI Minimum Functionality Specification v1.3”. Each entry in the list below is cross-referenced to the relevant Section in that document.

The remote acquisition function has been enhanced to require that open access to *energy data* be available to all entitled parties, in addition to any other access arrangements made to access other functions in the *meter*.

A *meter* that meets the requirements of the *minimum functionality specification* is termed a ‘smart meter’ for the purpose of these rules.

The *type 5 accumulation boundary* has been set to zero for all jurisdictions.

These changes apply to *metering installations* types 1 to 6.

A - Functions to be mandated in a meter and specific requirements associated with those functions.

The following functions and requirements (which together form the *minimum functionality specification*) must be either included in a meter within a metering installation at a settlements point or associated with the deployment of that meter, as the case may be:

1. Measurement And Recording (S7.1);
2. Remote Acquisition (S7.2);
3. Local Acquisition (S7.3);
4. Visible Display On Meter (S7.4);
5. Meter Clock Synchronisation (S7.5);
6. Load Management Through A Controlled Load Contactor Or Relay (S7.6);
7. Supply Contactor Operation (S7.7);
8. Supply Capacity Control (S7.8);
9. Home Area Network using Open Standard (S7.9);
10. Quality of Supply and Other Event Recording (S7.10);
11. Meter Loss Of Supply Detection (S7.11);
12. Remote Meter Service Checking (S7.12);
13. Meter Settings Reconfiguration (S7.13);
14. Software Upgrades (S7.14);
15. Plug and Play Device Commissioning (S7.15);
16. Communications And Data Security (S7.16);
17. Tamper Detection (S7.17);
18. Interoperability For Meters/Devices At The Application Layer (S7.18);
19. Hardware Component Interoperability (S7.19);
20. Meter Communications: Issuing Messages And Commands (S7.20);
21. Customer Supply (Safety) Monitoring (S7.21).

B - General rules

1. The *minimum functionality specification* applies to all new, refurbished and/or replacement *metering installation* types 1, 2, 3, 4, 5 and 6 (or their components as the case may be) from the commencement of these rules.
 - (a) For the removal of doubt, the *minimum functionality specification* also applies to *metering installations* in single consumer premises and *embedded networks*.
2. The *minimum functionality specification* applies to a *metering installation* at a *settlements point* where an appliance (registered against that *settlements point*) has the potential to, or does, inject electricity into that *settlements point*.

C - Responsibility for changes to meter settings

1. AEMO is responsible for authorising alterations to any changes to parameters or settings in a *meter* that contains the *minimum functionality specification* but only to the extent that the parameters or settings are associated with the measurement and recording (including associated log entries) of *energy data*. Note that rule 7.8.3(a) will be modified to restrict AEMO to the role originally intended by the existing rules.
2. The *Metering Provider* is responsible for implementing parameter or setting changes in the *meter* in accordance with rule 7.8.3(b) for *meters* that do not meet the *minimum functionality specification* subject to AEMO's authorisation.
3. The *Metering Provider* is responsible for implementing parameter or setting changes in the *meter* where it meets the *minimum functionality specification* providing those parameters or settings:
 - (a) do not affect the measurement or recording (including associated log entries) function of the *meter*;
 - (b) which are designated as '*FRMP settings*' in an AEMO procedure have been requested by the *FRMP* who is registered against the *settlements point* to which the *metering installation* is assigned; and
 - (c) which are designated as '*LNSP settings*' in an AEMO procedure have been requested by the *LNSP* who is registered against the *connection point* to which the *metering installation* is assigned.
4. AEMO must establish and maintain a procedure (which may be the metrology procedure) on the arrangements by which changes to all parameters and setting in a *meter* that contains the *minimum functionality specification* may be requested by a *FRMP* or other authorised party, and the method of receiving and actioning those requests by an appropriate *Metering Provider*.

D - Open access to the meter measurement function

1. In addition to the above *minimum functionality specification*, the measurement and recording function (S7.1) and remote acquisition function (S7.2) must be configured to enable open access to the *energy data* held in the *meter*, in addition

to the requirements in the *minimum functionality specification* associated with these functions.

2. For the removal of doubt, the remote acquisition function may be configured to support individual open access to a *meter* as well as operator facilitated access to that *meter*, providing that open access is always available to a person who is entitled to access the *energy data* in that *meter*.

E - Reversion prohibition on minimum functionality specification

1. If a *meter* is installed in a *metering installation* and that *meter* meets the requirements for *minimum functionality specification*, a device or devices that replace that *meter* must contain in total the full set of functions required by the *minimum functionality specification* and in addition any additional functions that were installed in that *meter* (subject to those functions not being regarded as obsolete). For example, ripple control functionality would be retained in a replacement *meter* if it were included in the *meter* prior to its replacement.
2. The *type 5 accumulation boundary* will be set at zero MWh per annum for all *participating jurisdictions* from the commencement of these rules and remain at that level until the meter is replaced by one that contains the *minimum functionality specification*.
3. The *metrology procedure Part A* is to be amended to be consistent with this rule. That is, the *metrology procedure* must require the energy consumed and measured by a *meter* capable of measuring *interval energy data* to be settled in the wholesale market on *interval energy data* and not on *accumulation energy data* where a consumer currently has an interval *meter* installed, regardless of whether that *meter* has not been upgraded to a smart *meter* and the type of tariff applied to the consumer.

Part 3 - Communications infrastructure platform for remote access to a metering installation

Objective: The purpose of these rules is to clarify the arrangements and responsibility for the provision of communication infrastructure to a *metering installation*.

Introduction

The current version of the *Rules* contains minimum regulation of the provision of remote communications to a *metering installation*. Rule 7.11.3 provides the following high level requirements:

7.11.3(c): *Metering Data Providers* must maintain *electronic data transfer* facilities in order to deliver *metering data* from the *metering data services database* to the *metering database* in accordance with the relevant *service level procedures*.

7.11.3(h): *Metering Data Providers* must maintain *electronic data transfer* facilities in order to deliver *metering data* from the *metering data services database* to *Market Participants* and *Network Service Providers* who are entitled to receive *metering data*.

7.11.3(i): The *Metering Data Provider's* rules and protocols for the collection of *metering data* from a *metering installation* must be approved by AEMO and AEMO must not unreasonably withhold such approval.

7.11.3(j): The *Metering Data Provider* must arrange with the *responsible person* to obtain the relevant *metering data* if *remote acquisition*, if any, becomes unavailable.

The Glossary defines *electronic data transfer* in the following way:

The transfer of data by electronic means from one location to another.

Rule 7.3.1(a)(3) currently places a mandatory requirement for certain *metering installations* to contain the following functionality:

A metering installation, unless it is classified as an unmetered connection point in accordance with schedule 7.2, must [for] metering installations types 1, 2, 3, or 4, have electronic data transfer facilities from the metering installation to the metering data services database.

Rule 7.7(a) provided for specified people to obtain access to *energy data* (amongst other data). Rule 7.7(b) allows that person to gain electronic access to the *energy data* from the *metering installation* providing certain conditions are met. These provisions together ensure that AEMO can collect data from a *meter* by *remote acquisition* should this be necessary if the market is under duress for any reason. They also allow other parties (including a consumer) to access the *energy data* directly from the *meter* should this be requested for any reason.

The Glossary defines *telecommunications network* in the following way:

A telecommunications network that provides access for public use or an alternate telecommunications network that has been approved by AEMO for the *remote acquisition of metering data*.

In light of the establishment of the *minimum functionality specification for metering installations*, and the progressive shift towards all *metering installations* requiring this minimum functionality, as well as the need by *FRMPs* and *distribution network service providers* to communicate to *metering installations* and/or the consumer for various purposes, it is recognised that the current policy on the provision of *electronic data transfer facilities to metering installations* is in need of revision.

The following policy principles have guided the development of these rules:

The communication infrastructure to a *metering installation* must be provided in a way that:

- supports competition in *metering data providers*;
- provides open access at least for the collection of *energy data*;
- encourages open access for all functions included in the *minimum functionality specification*;
- encourages competition in the provision of the infrastructure;
- does not unnecessarily limit the infrastructure to one *local area*;
- permits existing public telecommunication infrastructure providers to offer services if they so choose;
- permits any *meter* that has pattern approval from the National Measurements Institute (and meets the *minimum functionality specification*) to be connected to the infrastructure;
- encourages an international standard *meter* software ‘language’ to be adopted for *meter* and communications interoperability; and
- allows *metering data* services are provided at an efficient cost.

The following paragraphs contain the changes to be recommended in regard to the provision of *electronic data transfer facilities*.

Electronic data transfer infrastructure

1. Any person may provide a *telecommunications network* between a *metering installation* and a *metering data services database* and/or the *metering database*.

2. A person who performs the connection between a *metering installation* and a *telecommunications network* must be registered and accredited by AEMO for that role as provided by rule S7.4.2(a) and Table S7.4.3.
3. A *telecommunications network* that does not provide public access (an alternate *telecommunications network*) must ensure that:
 - (a) its interface to the *metering installation* does not prevent open access to the *energy data* in the *metering installation* being available to any party who has this right under rules 7.7(a);
 - (b) its interface to the *metering installation* does not prevent another party from providing an alternate *telecommunications network* to that *metering installation* should that be desirable for any reason.
4. The change of a *meter* or its *communication interface* by a *Metering Provider* to increase the number of communication ports at the *meter* must not interfere with the connection and operation of an existing *telecommunications network* at that *metering installation*.
5. In providing its approval to the alternate *telecommunications network* AEMO must confirm, at least, that:
 - (a) open access to *energy data* and the relevant *meter* logs is preserved for the collection of *energy data*;
 - (b) either operator facilitated access, or open access, is available for all smart meter functions that don't relate to the collection of *energy data*;
 - (c) the provision for multiple communication ports at the *metering installation* is not inhibited by any one alternate *telecommunications network*;
 - (d) where an operator facilitated access is to be provided, a User Manual is publically available that explains how the facilitated access would operate, the rights and obligations of all parties who seek or provide access to that *telecommunications network*, and in AEMO's opinion the User Manual is reasonable (in that it provides the necessary guidance to parties seeking to use the *telecommunications network*);
 - (e) section 7.16 "Communications And Data Security" of the *minimum functionality specification* is operational and is placed on an audit cycle for assessment at least every three years.
6. The *Metering Provider* assigned to a *metering installation* must manage *electronic data transfer* congestion at that *metering installation* in accordance with rule 7.7(c1), should there be a potential for this to occur.
7. Charges for the use of a *telecommunications network* (whether public or alternate) are to be based on commercial considerations.

3 Clarifying AEMO's demand forecasting responsibilities

Objective: Clarifying the existing rules regarding AEMO to collect better information to inform demand forecasting for market operational functions. In order to achieve this objective the existing rules associated with specific reporting obligations may need to be rationalised to remove any ambiguity regarding AEMO's information gathering powers.

Application: Proposed rule change to replace relevant clauses in Chapter 3, Chapter 4 and Schedule 5.7

Propose new arrangements:

1. Information gathering powers of AEMO

- (a) AEMO has the power to gather information with respect to the potential demand side participation in the market from various participants for the purpose of meeting its obligations in relation to reporting and its market operation functions as set out in the rules.
- (b) AEMO must develop procedures outlining the range of information that it seeks from participants and the timeframes in which it requires it. The procedures should also set out the frequency with which this information will be sought from participants.
 - (i) The procedures should also set out the means by which AEMO will use actual meter data to periodically review and verify the accuracy of information provided by participants as part of the information survey.
- (c) Participants must comply with all reasonable information requests from AEMO in relation to any of their reporting requirements set out in the rules, and in the timeframes requested by AEMO.
 - (i) This may potentially require AEMO to access to commercially sensitive information for which appropriate governance arrangements should be established.

2. Representing non-scheduled demand and non-scheduled generation

- (a) AEMO must report on and attempt to represent non-scheduled load and non-scheduled generation in relation to:
 - (i) price responsiveness of demand
 - (ii) elasticity to retail prices, including spot prices;
 - (iii) response to time variable network tariffs;

- (iv) response to mechanisms by which the network companies directly manage network loading. This may also extend to include retailer initiated direct load control for managing system load; and
 - (v) the proposed demand response mechanism (once in effect).
- (b) Represented non-scheduled load and non-scheduled generation should be determined on a NEM wide basis, as well as at the NEM region level.
- (c) This information can be used by AEMO for the purpose of meeting its obligations in relation to reporting and its market operations, not limited to:
- (i) Projected Assessment of System Adequacy reporting requirements;
 - (ii) Energy Adequacy Assessment Projection;
 - (iii) Central dispatch;
 - (iv) Pre-dispatch schedule;
 - (v) Statement of opportunities;
 - (vi) Load forecasting; and
 - (vii) Annual forecast information for planning purposes.

3. **Reporting on the levels of demand side participation**

- (a) AEMO must update and report on its expectations regarding demand side participation capabilities in the National Electricity Market on an annual basis at minimum.
- (b) AEMO's forecasts regarding demand side participation can be used as an input, where appropriate, into its various other reporting requirements set out in the rules.
- (c) AEMO must periodically review information provided by participants regarding demand side participation against actual customer market data recorded during market events. This should enable AEMO to verify the general accuracy of information provided and identify likely levels and sources of missing information.

4. **Rationalising existing reporting requirements:**

- (a) In developing this rule change, consideration must be given to whether the existing clauses in the rules relating to short term PASA, medium term PASA, and the ESOO can be rationalised to avoid duplication or ambiguity in relation to the range and type of information that AEMO must collect and report on.

4 Efficient and flexible pricing

Objective: The purpose of the draft specification is to set out the proposed changes required to the National Electricity Rules (NER) and other regulatory arrangements to bring into effect our proposals for introducing flexible pricing.

The details provided in this drafting specification are intended to form the basis for a detailed design specification for the SCER so that it can be returned to the AEMC as a rule change for considered implementation in the NER.

The specification focuses on making changes in three key areas:

- Chapter 6 of the NER (distribution rules);
- National Energy Retail Rules (NERR); and
- Chapter 7 of the NER (metering rules) and NEM metrology procedure, Part A

The changes to the distribution pricing rules focus on tightening the pricing principles for, and consultation in respect of, network tariffs. Amendments to the NERR focus on giving effect to our proposals for phasing in flexible network tariffs by ensuring they are able to be reflected in standard retail offers. Changes to Chapter 7 and consequential amendments to the NEM metrology procedure would reflect our recommendation that once consumers have a meter with interval reading capability in place their energy consumption should be settled on an interval (not accumulation) basis.

4.1 Changes to distribution pricing rules

4.1.1 Strengthening pricing principles

The long run marginal cost (LRMC) of the network should form the key basis for setting efficient network tariffs. We propose to strengthen this requirement in the rules and provide greater definition around how the LRMC of network services should be signalled to consumers. We also consider this should recognise that the interaction of peak demand and available network capacity in different parts of the network that drives network costs, and that therefore some level of geographic variation in pricing should be allowed. To achieve these objectives we propose clause 6.18.5 (b) (1) is amended so that:

- Network tariffs are set on the basis of LRMC of the network service, rather than just taking LRMC into account (the current requirement); and
- LRMC is defined as the present value of bringing forward network capital and operating costs to meet a particular user's sustained incremental derived demand for the relevant network service

- Network tariffs should be based on demand at times of greatest utilisation of the distribution network and for which investment is most likely to be contemplated (because this drives the quantum of LRMC); and
- to the extent practical, network tariffs should reflect current and forecast constraints within the distribution network.

We propose that Clause 6.18.5 (b) (2) (ii), the customer responsiveness criterion, is removed. It lacks clarity and could be interpreted as encouraging distribution businesses to set network tariffs in a manner that shifts costs onto particular classes of consumers - those deemed to be least responsive to such a charge. We propose that Clause 6.18.5 (b) (2) (ii) is replaced with the following clauses:

- that the development of network tariffs structures take into account the likely impacts on consumers; and
- that any network tariff structure proposed has regard to relevant consultation requirements in the rules (see below).

For similar reasons we propose that Clause 6.18.5 (c) is amended to state the following:

- If expected revenues are not recovered through operation of 6.18.5 (b) (1), then the remaining amount should be recovered as a postage stamp from all consumers.

These changes are proposed to remove the risk inherent in the existing provision that under strengthened pricing principles costs recovery may be unreasonable shifted to particular classes of consumers. Further, adding a consumer impacts criterion recognises that we are moving into an environment where consumers will be exposed to more complex tariff structures. This is a key issue which we also seek to address through new consultation and information provision arrangements, which we discuss in section 4.1.2 below.

In part to address this issue, as well as the need to provide greater clarity around interpretation of the pricing principles for distribution businesses, we propose that a new clause is inserted into the distribution rules requiring:

- The AER to develop and publish a guideline that sets out appropriate methodologies and/or approaches for calculating LRMC and the kinds of tariff structures that would signal LRMC to consumers. The guideline should also set out how the consumer impacts criterion should be interpreted. For example, it could specify that network tariffs consistent with the consumer impacts criterion would, to the extent practicable, be proportionate, simple, and transparent. This will facilitate consumer understanding of the tariff structures to which they are exposed, placing them in the best position to respond and manage the impacts.

4.1.2 New consultation requirements in the distribution rules

To ensure new network tariff structures are effective and proportionate we consider it important that retailers and consumer groups have a more formal role in influencing network tariff structures. We propose therefore that distribution businesses are required to develop a new tariff structures statement and consult on this statement with consumer groups and retailers

To give effect to these proposals we propose the following amendments to the rules:

- Clause 6.8.2 (c) (4) to require distribution network businesses to provide a statement of proposed network tariff structures, or 'network tariff structures statement' in their regulatory proposal (in addition to the current requirement for distributors to provide indicative prices) for each year of the regulatory control period. They will need to demonstrate that in developing the network tariff structures statement that they have consulted with retailers and consumer groups (as per AER guideline, see below). Submissions in respect of the distribution businesses regulatory proposal may also provide commentary on the statement of tariff structures alongside other aspects of the regulatory proposal as per clause 6.9.3.
- Insert a new clause to require the AER to develop and publish customer consultation guidelines, setting out:
 - the customer consultation to be undertaken by a distribution network business in developing the initial and updating its annual statement of network tariff structures; and
 - the information required regarding the customer consultation undertaken by a distribution network business in developing its statement of network tariff structures.
- Clause 6.18.2 (a) (1) and Clause 6.18.2 (a) (2) should be amended so that distribution network businesses are required to include their statement of proposed network tariff structures in their initial and annual 'pricing proposals'.
- Clause 6.18.2 (b) (5) is amended so that the annual 'pricing proposal' include the nature of any variation or adjustment to the network tariff structure statement that could occur during the regulatory year.
- Clause 6.18.8 (a) is amended so that the AER only approves the annual pricing proposal if it is consistent with requirements for consultation on variations under the AER consultation guideline.
- Clause 6.18.2 (a) is amended so that the timing is brought forward by a specified period (to be determined) for the distribution network business to submit its annual pricing proposal for review by the AER.

- Clause 6.18.8 (d) is amended so that the AER is required to publish an approved pricing proposal (including any amendments made by the AER under this clause 6.18.8) within a certain number of days (to be determined) from the date of submission of a pricing proposal by a distribution business under clause 6.18.2.
- Clause 6.18.9 (3) (a) is amended to require a distribution network business to publish on their websites a statement of network tariff structures which has been developed and updated in accordance with the customer consultation guidelines developed by the AER and includes the information specified in the consultation guidelines.
- Clause 6.18.9 (3) (b) to require information for a particular regulatory year to be posted on the website within five business days from the date the AER publishes an approved proposal under clause 6.18.8(d) for that distribution network business.

4.1.3 Other proposed changes to the distribution pricing rules

A number of other areas of the distribution pricing rules will need review to give proper effect to the changes we propose for implementing cost reflective pricing for consumers:

- Review the pricing side constraints under Clause 6.18.6 (b) to ensure the level of the permissible percentage for revenues from a tariff class is consistent with proposed amendments to 6.18.5 (b) (1) (to ensure this this clause is consistent with more widespread implementation of flexible network tariffs).
- Remove the exemption to Clause 6.18.6 (b) for consumers on interval meters, under clause 6.18.6 (e). This provision appears redundant given that neither price capped nor revenue capped businesses are prevented from structuring their prices as they see fit under the rules (provided overall revenue constraints are adhered to). It has the potential to create confusion as it could be read to mean that consumers with smart meters are not subject to the overall 2 per cent pricing constraint. Consequently, we propose that this provision is reviewed to assess whether it is needed. We consider all residential and small business consumers should simply be subject to the broader constraint 6.18.5 (b) (1), regardless of whether they are on smart or accumulation meters.
- Insert a new clause that requires the distribution network business to continue to make available a non-flexible network tariff to consumers. The methodology for calculating the non-flexible network tariff should be set out in the AER guideline we proposed in Section 4.1.
- Insert a new clause that provides flexibility for the AER in setting revenue allowances to introduce measures that would help manage revenue volatility for distribution network businesses occurring as a consequence of greater use of flexible pricing approaches.

- Insert a new clause that sets out details of a mechanism that would allow distribution network businesses as part of the network price setting process to manage volatility associated with timing of costs and benefits of DSP projects. This amendment would seek to address issues we raised in Chapter 7 of the final report.

4.2 Changes to the National Energy Retail Rules

Our approach to phasing in flexible pricing operates by segmenting the customer base into different groups or bands determined on the basis of consumption thresholds:

- Large residential and small business consumers above a defined annual consumption threshold will be required to have an efficient and flexible network tariff as part of their retail price offer (this group of consumers are referred to as **band 1**);
- Medium residential and small business consumers with an annual consumption level below the band 1 threshold but above a defined threshold for small consumers will transition to a retail price offer that includes an efficient and flexible network tariff. These consumers (**band 2**) will have the option not to move to a flexible retail pricing offer but instead remain on their existing retail price structure. This only applies to those consumers who already have a meter with interval read capability which enables such flexible retail price offers;
- Small consumers – which is all other residential and small businesses with consumption below the small consumer threshold will remain on their existing retail price structure (**band 3**). Consumers in this band with the appropriate enabling metering technology will be able to choose an efficient and flexible retail price offer, if they so wish.

To give effect to the banding approach we propose that changes are made to NERR, and mirroring legislation in each of the jurisdictions where the NERR does not apply. Part 16 - (2) of the NERR should be amended so that in its pre-contractual duties the retailer advises the customer of two types of standard offers;

- A standard offer with a flexible network tariff; and
- A standard offer with a non-flexible network tariff.

The retailer would inform the customer of which standard offer is applicable for the customer. It would be incumbent on the retailer to identify what band the consumer falls within and make the offer on that basis.

A new Part will need to be added the NERR that sets out the following:

- The applicable consumption thresholds for each jurisdiction that defines the bands, and subsequently, the applicable standing offer for consumers.
- How the bands are determined and who they apply to.

- The type of meter that will be required for a consumer in a particular band.
- Relevant information to provide to consumers with respect to the bands, and the manner of how such information should be provided.
- Purpose of the information.
- Whether information should be published on the website.

This information would need to be included in Retail Pricing Information Guideline prepared by the AER (and the fact sheets retailers are required to provide consumers).

4.3 Chapter 7 - Metering provisions and NEM metrology procedure, Part A

We propose that a new clause is inserted in Chapter 7 of the rules so that:

- the accumulation boundary value for type 5 interval meters is set to zero MWh per annum for all jurisdictions; and
- the NEM metrology procedure Part A and any supplementary jurisdictional metrology metering codes are amended accordingly.

5 Network incentives

Draft specification for the proposed rule change to reform application of the demand management and connecting embedded generation incentive scheme

Objective: To reform the current demand management incentive scheme to provide the possibility of appropriate incentives for distribution network service providers (DNSPs) to pursue efficient DSP projects. The incentive scheme will be developed with an overarching objective and supporting principles. The AER should have sufficient discretion to develop the detail design of the scheme – which may contain multiple mechanisms – and the flexibility to adapt the application of the scheme to the individual circumstances of each distribution business.

Application: Proposed rule change to replace current clause 6.6.3

Propose new arrangements:

1. Demand Management Incentive Scheme

- The AER shall publish an incentive scheme or schemes (*demand management incentive scheme*) to provide incentives for DNSPs to implement efficient DSP options
- The scheme must be applied in a manner consistent with the following objective: *“to provide an appropriate return to the network businesses for DSP projects which deliver a net cost saving to consumers to support efficient demand management by networks”*:
 - *DSP projects are defined as any conscious use by the DNSP of non-network solutions including demand response, energy efficiency or embedded or distributed generation to reduce load at risk or defer the expenditure of capital to augment the network.*
 - *Efficient DSP is defined for the purposes of the incentive scheme as any DSP project that delivers a net benefit to consumers, regardless of where in the electricity supply value chain those benefits arise.*
- The AER has the option to include the demand management incentive scheme as part of the DNSPs distribution determination. The application of the scheme can differ by DNSP.
- The AER can amend the incentive scheme in accordance with the distribution consultation procedures.
- The demand management incentive scheme must be applied in a manner consistent with the following principles:
 1. DSP projects must address an underlying network issue in order to qualify for inclusion in the incentive scheme

2. Expenditure on the projects approved under this scheme must be treated the same as expenditure approved under the normal expenditure determination process.
 3. Notwithstanding item 2 above, that the consideration of funding for qualifying DSP projects recognise the need to incentive networks over the long term and not just the forthcoming regulatory period.
 4. Payment of any reward available under the scheme should reflect the timing of benefits in order to smooth the bill impact on consumers.
 5. The scheme should be simple to apply, such that the incentive design should be easy to understand, implement and administer for all market participants.
 6. The scheme should contribute to achieving a material change in the amount of efficient DSP in the market.
 7. As one purpose of the incentive scheme could be to build capability among DNSPs in planning and implementing DSP, the scheme should include requirements regarding the monitoring of DSP project outcomes and publication of results as a means for maximising the impact of the incentive scheme expenditures.
- In developing the demand management incentive scheme, the AER must have regard to:
 - (a) market rates for comparative DSP services;
 - (b) the need to include in the cost-benefit assessment the value to customers participating in the DSP project of the electricity they would have used except for that participation;
 - (c) the range of market benefits permitted under the regulatory investment test for distribution;
 - (d) the effect of the particular control mechanism to which the DNSP is subject on incentives to adopt or implement efficient non-network alternatives;
 - (e) the extent a distributor is able to offer efficient pricing structures;
 - (f) any possible interaction with other incentive schemes; and
 - (g) the willingness of customers to pay for increases in costs resulting from the implementation of the scheme.
 - The AER shall decide what information is needed from the DNSPs to monitor the application of the demand management incentive scheme and to verify outcomes.

- The AER shall publish the demand management incentive scheme no later than nine months after the commencement of this rule.

2. Calculation of the share of non-network market benefits

- Under the scheme, the network is permit to retain a share of associated non-network related market benefits as determined by the AER.
- The value of the incentive must be proportional to the net benefits deliver to the market.
- We propose that the maximum percentage of non-network related market benefits which can be retained by network businesses (the actual percentage can vary by business and by time).
- Any standardised values for non-network benefits used to calculate the value of the incentive must be consistent with the RIT-D guidelines.
- Methodologies used to determine the extent of the consumer demand response should be consistent with baseline consumption methodologies approved for the demand response mechanism proposed for the wholesale market where the circumstances are similar, except where the DNSP can provide justification for a different value being used.

3. Innovation Allowance

- Introduce a new clause which permits the AER to approve an innovation allowance scheme for research and development activities related to DSP.
- Note that the objective of the innovation allowance scheme should be to provide funding for and an incentive to DNSPs to undertaken activities that will increase their knowledge regarding (a) the ability of different approaches (both technology and pricing based) to achieve useful and reliable demand reductions, (b) the costs of those approaches, and (c) their impacts (if any) on network systems operations.
- The AER should have the flexibility to determine the amount of the innovation allowance for each distribution business (noting that these amounts could vary by business and over time).
- The AER should have the discretion to develop the design of the innovation allowance scheme subject to the scheme being simple for it and the DNSPs to administer (i.e., that its associated transaction costs are appropriate).
- Businesses must provide all relevant information and data arising from such pilots/trials approved under this scheme to the AER in a timely manner and that all such information be available for publication unless reason for confidentiality is established to the satisfaction of the AER

- Results of the projects approved under this scheme must be published in the DNSP's distribution annual planning report.

4. **Include allowance for foregone profit under the DMIS**

- Lost revenue can be used as a starting point for calculation of lost profit associated with any approved DSP project.
- In calculating foregone profit, the AER must have regard to the tariff structure and costs of the network business.

5. **Capital and Operating Expenditure Objectives**

- Amend NER Clauses 6.5.6 (a) to (c) and 6.5.7(a) to (c) to enable the AER to consider potential non-network benefits when assessing the efficiency of proposed DSP activities included in business revenue proposal.

Issues for the Rule change process to consider:

1. What should be the maximum cap for the proportion of non-network related markets benefits which can be retained by the network businesses? *With respect to the share of network benefits this is likely to be determined by the capital expenditure incentive scheme applied to the DNSP.*
2. Should the ability of networks to seek funding under the demand management incentive scheme be limited to the distribution determination process or should the businesses be able to seek funding within the regulatory period as well? *One of the advantages of DSP projects is that they can have a shorter lead time than a capital works programme – sometimes less than a year. One of the disadvantages is that it is difficult to pin down specific costs a long way ahead of time – customers are generally not willing or able to commit to participate in a scheme years ahead of seeing any benefits from it.*
3. What risks to the network businesses could arise from the AER's ability to impose performance standards and fines/penalties for non-compliance? What is the magnitude of these risks and therefore their potential impacts on the ability of the proposed incentive mechanisms to achieve their objectives?
4. Should the AER be required to develop and provide deemed standardised values for the non-network market benefits? If not, should the scheme specify how such values should be developed for use in the scheme by the network businesses and how they will be evaluated by the AER?
5. What should the name of the revised scheme be?

6 Demand response mechanism & new category of market participant

- Terms of reference for AEMO to develop the rule change proposal for the demand response mechanism and new category of market participant recommended in the final report of the Power of choice review.
- Draft specifications for the demand response mechanism and the new category of market participant.

6.1 Terms of reference

As part of the Power of choice review, the AEMC has recommended that SCER task AEMO with developing the details of the rule change proposal and supporting procedures to implement the demand response mechanism (DRM).

This document outlines the terms of reference to support the development of the rule change and supporting procedures in a transparent and timely manner. The terms of reference covers:

1. Timeframes and process for implementing the DRM, implementation policy issues to be resolved by AEMO, and the composition of an industry working group to provide input into the development of the rule change proposal and supporting procedures;
2. Draft specifications for developing the rule change proposal and supporting procedures for the DRM; and
3. Draft specifications for creating a new category of market participant for the provision of non-energy services.

Timeframes and process for implementation

AEMO is to be tasked with developing the details of the DRM and new category of market participant rule change proposals and supporting procedures for operation in the National Electricity Market.

The rule change proposal for the DRM should be completed to a sufficient level of detail such that it can be further considered by the AEMC in its rule making process. In considering the draft specifications that are included as part of the terms of reference, AEMO should give consideration to those aspects of that should be included in the rules, and those that are best suited to the procedures.

Therefore, the rule change proposals submitted to the AEMC complete the first stage of a series of activities that must be completed before either the DRM or the new category of market participant is brought into effect. AEMO is not required to complete all the activities outlined in the terms of reference before submitting a rule change proposal to the AEMC.

The rule change for creating a new category of market participant to unbundle the sale and supply of electricity from non-energy services can be submitted to the AEMC as a separate rule change from the DRM rule change proposal.

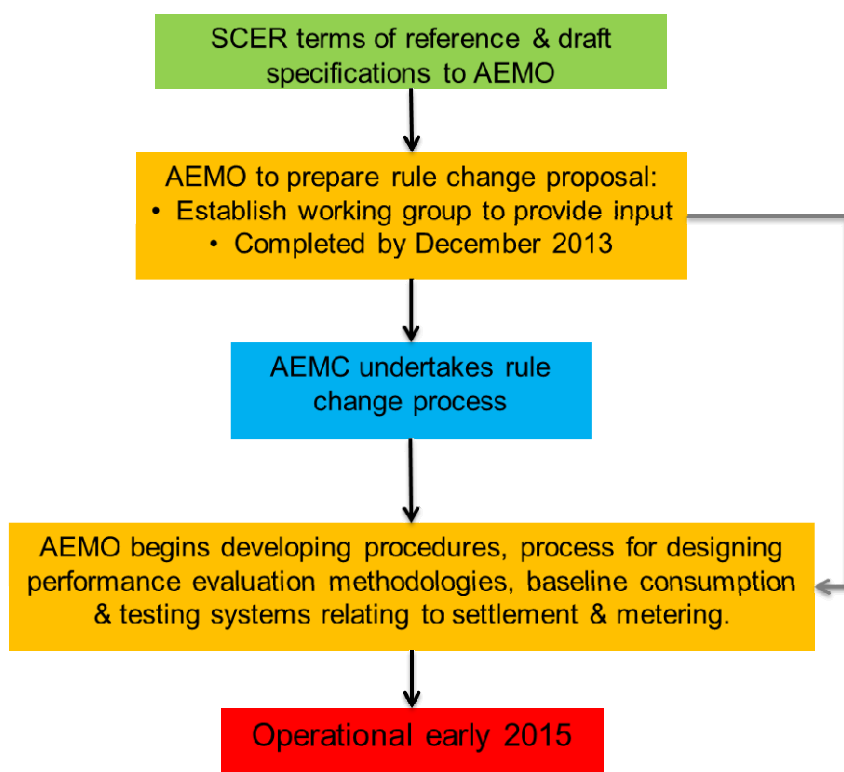
All rule change proposals relating to these terms of reference should be received by the AEMC no later than 15 December 2013.

In parallel to the AEMC assessing the rule change proposal, there should be adequate time for AEMO to continue assessment and planning of aspects of the DRM design and new category of market participant. These include developing performance evaluation methodologies, processes for establishing the baseline consumption, and testing.

During the process for developing and implementing the DRM and the new category for market participation, AEMO should utilise the support and guidance of the industry working group.

Figure 6.1 illustrates the general process for implementing the DRM and the roles of AEMO and the AEMC.

Figure 6.1 Implementation plan - DRM



6.1.1 Policy issues for consideration

While the draft specifications set out the scope of the high level framework for developing the DRM rule change proposal and supporting procedures, there are a range of detailed implementation issues that will require further policy consideration from AEMO. These include:

- **Registration.** The process and arrangements in place for registering consumers or third parties wishing to participate under the DRM. In developing policies for the registration process AEMO should consider the division of responsibilities amongst parties involved in a demand response action under the DRM, liabilities that may arise out of a DRM transaction, including prudential arrangements, and information regarding the facilities or assets providing the demand response.
- **New category of market participant.** Whether a new category of market participant is required to give effect to the DRM in the rules. AEMO should consider the extent to which the new category of market participant proposed by the AEMC in the Power of choice review to facilitate the provision of non-energy services could potentially be utilised for this requirement (see draft specifications, section 6.3).
- **Role of non-energy services.** Following, we also recommend that AEMO develop the rule change proposal and supporting procedures for the new category of market participant for the provision of non-energy services. Draft specifications are also included to provide guidance to the development of the rule change proposal.
- **Baseline consumption governance arrangements.** AEMO is required to determine the most appropriate baseline consumption methodologies for the NEM. In developing the governance arrangements for baseline consumption arrangements to apply estimates, AEMO should consider the costs and benefits of its proposed approach. AEMO should consider the costs and benefits of its approach to determine the optimal set of arrangements, in addition to the needs of consumers and retailers to ensure the integrity of the DRM.
- **Settlement arrangements.** The rule change proposal and supporting procedures should consider and propose changes to the NEM settlements process. The proposed changes should be within the current parameters of the MSATS process, and maintain the integrity of current arrangements.
- **Transparency and reporting functions.** The settlement arrangements should also include a reporting function to provide relevant information to the market on a frequent basis. AEMO should consider how frequently it should be required to publish information with respect to demand resources participating under the mechanism, and any other information it considers relevant to the market and the effective operation of the mechanism. A number of minimum reporting requirements are included in the draft specifications.
- **Notification process.** The process for consumers providing a demand response to notify market participants and other parties impacted by their action of their intention to enter into a demand response interval. In developing the policy for the notification process, AEMO should give regard to the size of the potential demand response, location, and the relationship to load management for the network businesses operating in the area.

- **Distributed generation.** AEMO should consider the extent to which distributed generation that is receiving a feed in tariff should be precluded from participation, given that these demand resources already receive an incentive to participate in the wholesale market.
- **Technical standards.** AEMO should give consideration as to whether technical standards should be developed in conjunction with the rule change proposal for the demand response mechanism. In the absence of industry developing its own standards, it should be feasible for any third party to provide a demand response to consumers who already have infrastructure in place to accommodate a demand response.

6.1.2 Industry working group

To support the development of the rule change proposals and supporting procedures AEMO should establish a working group to provide input and guidance into the policy issues for consideration.

The composition of the working group should reflect the likely participants impacted by the both rule change proposal, including:

- Small and large industrial end-users;
- Commercial consumers;
- Third party service providers;
- Retailers;
- Distribution network service providers; and
- Market institutions, including the AER and the AEMC;
- Jurisdictional state governments; and
- Department of Resources, Energy and Tourism

While AEMO should consider the views of participants in the industry working group, final decision on the policy issues for inclusion in the rule change proposal will rest with AEMO.

6.2 Draft specifications: demand response mechanism

6.2.1 Demand response mechanism - general design principles

Objective: The demand response mechanism is the means by which DR participants can provide demand resources directly to the wholesale spot market and receive the wholesale electricity spot price for the amount of demand resources provided.

The design of the demand response mechanism should ensure that demand resources are introduced into the market in a competitively neutral manner.

General design principles:

1. Participation is open to any entity that meets the requirements set out in the rules and AEMO's registration process, subject to any other requirements set out in the draft specifications.
2. The minimum requirements for participation by a DR participant include:
 - (a) classification as either market load or market generation;
 - (b) has a discrete NMI; and
 - (c) has a meter capable of being read on an interval basis.
3. To the greatest extent possible DR participants should be incorporated into the central dispatch process and settlement arrangements in a similar manner to generators, reflecting their entitlement to receive, rather than pay, within the NEM settlement system.
4. To the greatest extent possible, the DRM should be transparent and reflect the publishing and information requirements placed on scheduled and non-scheduled generators. Where published information is likely to reveal commercial in confidence information or identify individual suppliers of demand response, then aggregated published information should be used.
5. The market participant responsible for the purchase of energy through for wholesale settlement process, operated by AEMO, of a DR participant, is entitled to invoice the DR participant for the metered energy consumed at the agreed contract price by the DR participant plus the amount of demand response delivered to the wholesale market as calculated under the rules (the 'baseline consumption').
6. A DR participant can provide a demand response directly to the wholesale electricity market from a registered DR asset. A DR participant can also elect to have their demand resources coordinated through an authorised DR provider.
7. Where a DR participant chooses to have its demand resources coordinated through a DR provider, then registration of both the DR asset and the DR participant is still be required. The process should allow for any possible relationships between the DR assets, DR participant and DR provider to be tracked.
8. A DR provider responsible for coordinating the demand resources of DR participants can present to the market on an aggregated basis.
9. DR providers registered to participate in the wholesale market can register DR participants and their DR assets with the market operator. DR providers may

present to market on an aggregated basis, subject to meeting AEMO's registration requirements.

10. The amount of payment that a DR participant or DR provider receives from wholesale settlement is the amount of demand response delivered multiplied by the actual spot price in the relevant settlement period, multiplied by relevant loss factors as if the demand response had been delivered by a generator at the same location.
11. As part of the settlement process AEMO is required to pay the DR participant or its DR provider for the amount of demand response supplied to the market which is calculated as the difference between their estimated baseline consumption and their actual consumption, multiplied by the actual spot price delivered to the market.
12. DR participants are required to pay the network use of system charges based upon their actual metered consumption, not their estimated baseline consumption.
13. Market participants responsible for the sale and supply of electricity to a DR participant are required to separate out network charges from energy charges in that DR participants electricity bill.

6.2.2 Governance arrangements and registration

Objective: Participation under the DRM is open to any entity that meets the requirements set out in the rules and AEMO's registration process. Registration should facilitate the orderly participation of DR participants and DR providers to give confidence to the operation and integrity of the DRM.

Principles for participation:

1. Participation under this mechanism does not preclude a DR participant from participation in any other type of contractual arrangement aimed at facilitating a demand response. This includes arrangements such as pool -pass through contracts, load curtailment agreements, critical peak pricing programs and so forth. In assessing an application to register AEMO would not be expected to consider the interactions of other contractual arrangements.
2. Participation by a DR participant under the DRM does not preclude them from entering into a network support agreement and receiving payment from demand response actions associated with either the DRM or the network support agreement.
3. A consumer wishing to participate under the DRM must register with the market operator as a DR participant and meet the requirements for registration.
4. The registration must clearly identify the party that is the financially responsible market participant, which may be updated from time to time.

5. A DR participant or their DR assets or facility cannot be registered by more than one DR provider.
6. The registration process should set out clear guidelines for changing a DR provider, including conditions on use of the DR participant's demand response where the identity of the DR provider is in dispute.
7. In developing the rule change proposal and supporting procedures for the DRM, AEMO should also give consideration as to whether a new category of market participant is required to facilitate participation in the DRM. AEMO should consider this policy issues in the conjunction with the recommendation in the Power of choice review that a new category of market participant is established for the provision of non-energy services.
8. As part of the registration requirements AEMO should consider whether alternative prudential requirements for entities participating under the DRM are required to those currently set out in the rules for generators and other types of market participants providing a similar service.
9. In registering to participate under the DRM, the DR participant or DR provider is consenting to AEMO accessing information detailed in either its guidelines or the rules.
10. Registration as a DR participant or DR provider does not of itself authorise that entity to engage in the activity of purchasing electricity directly from the wholesale market unless the DR provider or DR participant is a registered Market Customer authorised to undertake such activities.
11. The rule change proposal and supporting procedures should give authority for AEMO to seek information relevant to the application to register as a DR participant or DR provider. The types of information required by the market operator is at their discretion, but should be set out in publicly available document.
12. The market operator should inform the relevant FRMP, DNSP and TNSP of an application to register one of their customers as a DR participant under the DRM.
13. AEMO shall determine an appropriate cost reflective participant fee for initial and ongoing registration of the DR participant.

6.2.3 Establishing and auditing the baseline consumption

Objective: The performance evaluation methodology outlines the way in which different consumer energy and metering information is used to develop the baseline consumption. Appendix C of the final report outlines the different performance evaluation methodologies approved by FERC for use in demand response programs in the United States.

The baseline consumption is the DR participant's electricity demand had it not change its consumption in order to provide a demand response under the DRM. The baseline consumption is deemed to be in effect under demand response interval events.

The estimated baseline consumption of a DR participant is used to establish the amount of demand response delivered to the wholesale electricity market during a demand response interval. The amount of demand response delivered to the wholesale electricity market is the difference between the DR's participant's estimated baseline consumption and its actual metered consumption during the demand response interval.

In developing the arrangements for establishing the baseline consumption of a DR participant, AEMO should give consideration to approaches used in other jurisdictions for establishing demand response baselines and their applicability for use in NEM. The arrangements should also be conducive to AEMO assessing and refining any issues associated with the baseline consumption.

AEMO should consider the costs and benefits of its proposed approach. For example, a least-cost approach for establishing the baseline consumption would place emphasis on the DR participant to propose its baseline in accordance with the rules and procedures and then submit the baseline, with supporting data, to the market operator for review and approval. An alternative approach would require the market operator to establish the consumer's baseline consumption, and be responsible for ongoing monitoring and updating of the baseline consumption.

To achieve each of these objectives it will be necessary for historical metering data and other data, as necessary, to be made available to AEMO. As appropriate, AEMO may also require DR participants or their DR providers to share other information and data regarding their facilities, such as production schedules, assets and so forth, some of which may be commercially sensitive or confidential information.

Principles for developing the baseline consumption:

1. In developing a consumer's baseline consumption AEMO should have regard to the following principles:
 - (i) **Clear rules for refreshing metered consumption data.** There should be frequent opportunities to refresh a DR participant's baseline consumption with actual metered data. The market operator should give consideration as to how to refresh the DR participant's baseline consumption if the DR participant enters into a demand response over a sustained number of days, which may result in out of date meter data being used to determine the baseline consumption.
 - (ii) **Accuracy.** The baseline consumption should accurately reflect what the DR participant's consumption would have been if the demand response event did not take place.

2. The performance evaluation methodologies should be able to accommodate a broad range of potential DR participants including small and large industrial facilities, and commercial facilities, as well as different end-users within a facility or across facilities.¹
3. A process should be established whereby AEMO works in conjunction with the potential DR participant to select an appropriate performance evaluation methodology.
4. The guidelines and procedures for developing the performance evaluation methodology should be reviewed periodically.
5. AEMO should develop guidelines that detail the issues and factors it takes into consideration when developing a consumer's baseline consumption for a DR participant and their facilities, including:
 - (i) historical consumption;
 - (ii) the nature of consumption and the use of variable load equipment, maintenance schedules and peak periods for electricity consumption, as it sees appropriate;
 - (iii) drivers of the demand of the end-use;
 - (iv) seasonal and weather influences; and
 - (v) any other matters the market operator deems relevant.
6. AEMO should develop guidelines for establishing conditions when meter data will be excluded from establishing the baseline consumption. Examples include.
 - (i) meter data that is the result of a change in normal demand patterns;
 - (ii) meter data based on demand reductions that are a result of operational changes not related to a demand response interval; and
 - (iii) meter data from the DR participant's estimated baseline consumption for the period for which the notification has effect.
7. AEMO should have the discretion to reject a DR participant's DR asset or facility where it is unable to determine an accurate and appropriate baseline consumption. This might be, for example, where the customer load is very volatile.

¹ There are likely to be different business activity types and even different end-users within a facility, which will result in a need for different baseline approaches. A particular DR provider or DR participant may therefore have a need for several baselines, and a particular baseline may be different for different days or seasons. For example, the operation of a particular piece of plant may differ by production schedules over the course of a week or across different seasons, or may be affected by other seasonal factors.

8. If appropriate, a dispute resolution process should be established where a DR participant or DR provider is in disagreement with AEMO's final decision on the baseline consumption.
9. For each DR participant, AEMO should establish a compliance program that includes general reviews and audits of the estimated baseline consumption. The compliance program may be conducted by a third party, other than AEMO. AEMO should nominate the minimum frequency of audits.
10. The market participant responsible for the sale and supply of electricity to a DR participant should have clear visibility of the DR participant's estimated baseline consumption.
11. AEMO may wish to consider publishing information regarding a DR participant's baseline consumption for the purpose of seeking feedback and comment from relevant parties that may be impacted by the DR participant's activities. This includes local DNPSs, TNSPs, market generators, market customers and embedded generation.

Arrangements for auditing or re-assessing the baseline consumption:

1. If there is a change in overall demand for electricity consumption from the DR participant's facility due to energy efficiency measures or a change in equipment, AEMO has the right to reassess the baseline consumption. Such factors may include energy efficiency measures, new end-use equipment, changes in production schedules or building schedule, or usage patterns.
2. The DR participant or DR provider is required to inform AEMO of any changes in operation to the DR asset or facility that will impact on the baseline consumption that does not represent a natural or ongoing variation in demand, such as unscheduled plant shut down for maintenance or other unforeseen incidents that impact on the DR asset or facility's ability to provide a demand response.
3. A DR participant should be required to notify the market (either directly or through the applicable DR provider) of any change that would alter either its baseline consumption or the magnitude and availability of its demand response on an ongoing basis. This may include any intention to change or upgrade any equipment responsible for providing a demand response, energy efficiency measures that may impact on the overall electricity demand from the DR participant's facility.
4. A DR participant must cooperate with AEMO in any unannounced audits or tests relating to establishing that DR participant's estimated baseline consumption.
5. In developing the rule change proposal and procedures AEMO should also consider the process, if any that should be used in instances where the baseline consumption has been found to be incorrect, or not updated as required. The

process determined by AEMO should establish remedy times that are applicable and under what conditions or timeframes non-remedy results in fines or de-registration, as appropriate.

6.2.4 Scheduling, dispatch and notification process

Objective: AEMO's central dispatch process should enable demand resources to participate on either a scheduled or non-scheduled basis when participating under the DRM.

To safeguard the effective and orderly participation of demand resources, the DRM should also include a notification procedure to signal to the market a DR participant's intention to enter into and conclude a demand response interval. The notification procedure should be designed in such a way as to inhibit gaming opportunities of DR participants or their DR providers.

Notification processes may also support giving sufficient notice to entities impacted by the demand response action.

Principles for scheduling, dispatch and notification process:

1. To the greatest extent possible arrangements for scheduled and non-scheduled demand resources should reflect those arrangements currently in place for scheduled and non-scheduled generation.
2. To the greatest extent possible demand resources should be encouraged to participate in AEMO's central dispatch as scheduled demand resources.
3. In developing the rule change proposal and supporting procedures AEMO should consider whether a threshold is applied to demand resources that intend on participating under the DRM and that are above a specified MW size. The rule change proposal and procedures should consider whether any modifications are required to scheduling arrangements to enable participation by demand resources under the DRM.
4. Demand resources deployed under the DRM will be subject to allocation of ancillary service costs in the event that ancillary services are needed in relation to a demand response interval. The manner in which this is done should be as close as possible to the approach used for generation and should be applied to demand resources that operate in both a scheduled and a non-scheduled manner.
5. For non-scheduled demand resources a notification procedure should be established that signals to the market a DR participant's intention to enter into and conclude a demand response interval.
6. The notification procedures should clearly state which entity – either the DR participant or DR provider – is responsible for providing market notification. The entity responsible for notification procedures may differ from the financially responsible market participant.

7. In developing the rule change proposal and procedures, AEMO must recommend an appropriate maximum period for a demand response interval, in hours, by optimising the demand response benefit against the risk of inaccuracy.
8. The market participant responsible for the sale of electricity to a DR participant should be eligible to automatically receive notification.
9. In developing the rule change proposal and procedures AEMO should give consideration as to whether a minimum time frame for DR participant's intention to enter into a demand response interval is required, and which parties are responsible for providing this notice depending on whether the demand response is aggregated across a region.
10. Prior to the conclusion of a demand response interval by a non-scheduled demand resource the DR participant or DR provider should notify AEMO of when it expects its electricity demand to return to normal levels, if at all.
11. Arrangements should be established that provide for AEMO to publish information regarding filed baselines and estimated demand response to enable networks to take this capability into account in its forecasting and its consideration of non-network alternatives to augmentation. The information may need to be aggregated to protect commercial information.

6.2.5 Settlement and verification

Objective: The purpose of the monitoring and verification program is to establish the amount of demand response delivered to the market by a DR participant as part of a demand response, and to outline the settlement arrangements at the conclusion of the demand response.

Principles for the monitoring and verification program:

1. In developing the rule change proposal and supporting procedures, AEMO will need to determine the minimum metrology requirements and specifications, including data delivery timeframes.
2. Verification of the amount of demand resources delivered to the market should occur in a timely manner to enable settlement of all relevant parties involved, including the DR participant's retailer, within the settlement billing cycle.
3. The process for receiving and verifying metering data from the metered DR assets or facilities of the DR participant should occur in a timely manner. To the greatest extent possible AEMO operator should have access to, and automatically receive data from, registered DR participants or their DR provider.
4. In developing the rule change proposal and supporting procedures, AEMO should clarify arrangements to settlement where during a demand response interval, the DR participant electricity demand is above its baseline consumption,

and which parties are liable for the amount of electricity consumed above the baseline consumption during the demand response interval.

5. Auditing arrangements should be established that provide a right for AEMO to audit relevant DR providers or DR participants in relation to the DRM.
6. AEMO should be required to report on a frequent basis the performance of estimated baseline consumptions used under the DRM, including:
 - (a) entities registered under the mechanism, the amount of demand response registered and parties responsible for coordinating demand response units;
 - (b) number of dispatches made and the magnitude of each on a scheduled and non-scheduled basis;
 - (c) the amount of demand response nominated and delivered to the market;
 - (d) the duration of demand response events; and
 - (e) any other information AEMO considers as appropriate.
7. Any other issues that AEMO considers relevant to the design of the monitoring and verification program.

6.2.6 Metering and distributed generation

To the greatest extent possible metering arrangements under the DRM should reflect the requirements necessary for settlement as determined by AEMO.

Principles for metering:

1. Metering arrangements should aim to support accuracy in establishing DR participant's estimated baseline consumption as well as timeliness in verifying the estimated baseline consumption for settlement purposes.
2. The use of separate metering should be encouraged when it is easy and efficient to do so. Using the baseline consumption should not be viewed as an adequate substitute for metering.
3. To the greatest extent possible, technical metering requirements should reflect arrangements for non-scheduled and scheduled market generation.
4. In developing the rule change proposal and supporting procedures, AEMO should consider whether the DR assets employ a metrology compatible with the DRM requirements.
5. Where it is economically feasible, distributed generation should be directly metered.

6. In developing the rule change proposal and supporting procedures, AEMO should establish arrangements in the event that during a demand response interval the metered consumption is negative, i.e., a DR participant with embedded generation actually exports power to the grid.

6.2.7 Performance and reporting program

Objective: A performance and reporting program should be in place during the initial years of operation of the DRM.

Principles for the program:

1. AEMO is required to deliver a performance review of the DRM on a yearly basis for the first five years of operation.
2. The purpose of the performance and reporting program is to inform the market of the impacts, if any, of the DRM including:
 - (a) frequency of demand response events;
 - (b) the types of DR assets and facilities used, for example, interruptibility, standby generation, and so forth;
 - (c) for each event, the bid price and market clearing price, magnitude of response by scheduled and non-scheduled demand response, individual DR participants (in aggregate) and DR providers within each category;
 - (d) geographic distribution of demand response;
 - (e) participation rates, size of maximum response, estimates on price responsiveness of participants;
 - (f) impacts on system reliability and security, including utilisation of the DRM during peak wholesale market demand and peak load;
 - (g) estimated costs of participation and administering the program; and
 - (h) any other issues the market operator views as relevant.

6.2.8 Key terms and concepts

Demand response mechanism (DRM): process by which registered DR participants receive the wholesale electricity spot price for a reduction in consumption.

Demand response participant (DR participant): end-use consumer that is registered to participate under the DRM.

Demand response provider (DR provider): third party that is responsible for coordinating the demand response of DR participants into the wholesale electricity spot market.

Demand response asset: the appliance or asset that is responsible for changes in electricity demand for the purpose of providing a demand response under the DRM.

Demand response facility: the facility from which the demand response action arises from.

Financially responsible market participant (FRMP): as per the current rules.

Demand resource: the available change in electricity demand for the purpose of providing a demand response.

Demand response: changes in electricity demand from the normal patterns of consumption in response to changes in the wholesale electricity spot price.

Demand response interval: the period of time over which a demand response is delivered to the wholesale electricity spot market.

Estimated baseline consumption: the DR participant's electricity demand had it not changed its consumption in order to provide a demand response under the DRM.

Performance evaluation methodology: the algorithm that takes into account the various types of information that influence electricity demand that is used as the basis for the estimated baseline consumption.

Notification: the process by which the nominated party signals to the market its intention to enter into and conclude a demand response interval.

6.3 Draft specifications: new category of market participant

Draft specification for creating a new category of market participant for the provision of non-energy services.

Objective: To create a new category of market participant in the National Electricity Rules that will allow for the unbundling of all non-energy services for the sale and supply of electricity.

In developing the rule change proposal and supporting procedures for the new category of market participant, AEMO should give regard to the potential interaction with the DRM rule change proposal. In particular, AEMO should assess to what extent the registration to provide non-energy services in this new category of market participant can also satisfy any registration requirements arising from the DRM.

The registration requirements for the new category of market participant should reflect the obligations and liabilities that are likely to arise from the provision of non-energy services.

(A) New category of market participant:

- (i) A new category of market participant should be created that enables entities registered in this category to provide or coordinate ancillary services into the ancillary services market in accordance with the current requirements for providing ancillary services.
- (ii) Entities participating in this category of market participant can present to market on an aggregated basis.

(B) Obligations and liabilities

- (i) The rule change proposal should set out clear obligations and liabilities with respect to each the new category of market participant.
- (ii) The rule change proposal and supporting procedures should outline clear responsibilities for each party to notifying other relevant parties of changes to their availability of service, or any power security issues that may arise.²

(C) Metering

- (i) In developing the rule change proposal and supporting procedures, AEMO should outline an appropriate set of metering requirements, in line with current arrangements that are primarily determined by AEMO.

² This issue is imperative under the scenario where, for example, load is interrupted as a demand response but the commensurate changes to bids in the ancillary services market does not occur. Under this scenario it would be expected that the market participant would be responsible for any activities associated with the ancillary services market, even though this scenario arises due to a disruption of energy related services.

(D) Settlement

- (i) Responsibility for this should remain largely unchanged from the current arrangements as ancillary services are already metered and settled separately to the wholesale market.

(E) Registration requirements

- (i) Registration for participation in this category of market participant does not permit an entity to sell and purchase electricity from the wholesale market unless they are registered to do so through another means set out in the rules.
- (ii) Prudential requirements should reflect that financial liabilities incurred by entities registered under this category are likely to be minimal. Basic requirements should continue to be met, such as those outlined in 3.3.1.³

(F) Exemptions from registration

- (i) Already registered market participants should not be required to register in this category if they wish to provide ancillary services. Instead current provisions should continue to apply regarding registering either market load or market generation as an ancillary service.

³ Rule 3.3.1 sets out a threshold for participation in the market including requirements relating to the Corporations Act, Australian residency and so forth.