

REVIEW

Australian Energy Market Commission

DRAFT STATEMENT OF APPROACH

Request for Advice on Cost Recovery for Mandated Smart Metering Infrastructure

Commissioners

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17 December 2009

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About the AEMC

The Council of Australian Governments, through its Ministerial Council on Energy, established the Australian Energy Market Commission (AEMC) in July 2005 to be the Rule maker for national energy markets. The AEMC is currently responsible for Rules and policy advice covering the National Electricity Market and concerning access to natural gas pipeline services and elements of the broader national gas markets. It is a statutory authority. Our key responsibilities are to consider Rule change proposals, conduct energy market reviews and provide policy advice to the Ministerial Council as requested, or on AEMC initiative.

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Abbreviations

AEMC	Australian Energy Market Commission
AER	Australian Energy Regulator
CoAG	Council of Australian Governments
Commission	see AEMC
CPI	Consumer Price Index
DNSP	Distribution Network Service Provider
DUOS	Distribution Use of System
EBSS	Efficiency Benefit Sharing Scheme
MCE	Ministerial Council on Energy
NEL	National Electricity Law
NEM	National Electricity Market
NEO	National Electricity Objective
RAB	Regulatory Asset Base
Rules	National Electricity Rules
SCO	Standing Committee of Officials
ToR	Terms of Reference
TOU	Time of Use

1 The Request for Advice

The Ministerial Council on Energy (MCE) has requested the Australian Energy Market Commission (Commission) provide advice on whether Chapter 6 of the National Electricity Rules (Rules) efficiently accommodates cost recovery for smart metering infrastructure mandated by a Ministerial determination.¹

This Draft Statement of Approach Paper commences the initial phase in preparing our advice to the MCE. The purpose of this Paper is to describe, and seek comment on:

- Our proposed approach to providing the advice; and
- The issues set out in the MCE's Terms of Reference (ToR).

1.1 MCE's Terms of Reference

The MCE seeks advice on mechanisms for the recovery of the efficient costs born by distribution network service providers (DNSPs), in meeting their obligations under a Ministerial smart meter roll-out or pilot determination. Under the ToR, we are to provide advice on a number of issues, including but not limited to, whether Chapter 6 of the Rules:

- Provides for the efficient recovery of DNSP costs from mandated smart meter roll-outs and pilots;
- Allows the Australian Energy Regulator (AER) to take into account 'reasonably achievable network operational benefits' in determining the efficient costs of smart meter roll-outs and pilots;
- Allows the AER sufficient flexibility to consider pass through applications by DNSPs for costs associated with mandated smart meter roll-outs and pilots;
- Provides appropriate incentives for DNSPs to promptly pass on efficiencies from roll-outs to customers, maximise the competitive purchase of metering services and meters, and manage technology risks associated with the roll-out of smart metering infrastructure; and
- Requires modification to smooth the tariff impact of costs associated with a smart meter roll-out decision on customers.

We have also been requested to propose Rule changes where we consider that the Rules could be improved to more efficiently accommodate Ministerial smart metering determinations.

¹ This request was made on 19 November 2009 by the MCE under Section 6 of the *Australian Energy Market Commission Establishment Act 2004 (South Australia)*.

In developing our advice, we are required to assume that:

- the provisions in the National Smart Meter Roll Out Determinations Transitional Rule have commenced;
- the Rules, standards and the National Electricity Market (NEM) technical procedures describing technical specifications, performance requirements, amendments to functions, service standards and national minimum functionality in respect of smart metering infrastructure have been made; and
- No further Rule changes for jurisdictional derogations in relation to the delivery of smart meter trial, pilot and roll-out programs will be made.

We are required to prepare our advice in accordance with the following process:

- Publish a Draft Statement of Approach for public comment by 20 December 2009;
- Publish a Final Statement of Approach, after considering comments received on the Draft Statement of Approach;
- Publish draft advice for public comment; and
- Provide a copy of our final advice to the MCE by 31 August 2010. This final advice must be prepared after considering comments on our draft advice and must be published on our website no later than two weeks after it is provided to the MCE.

A copy of the ToR is at Appendix A.

1.2 Background to the Request for Advice

In April 2007, the Council of Australian Governments (CoAG) endorsed a staged approach for a national mandated roll-out of electricity smart meters, in areas where the benefits of a roll-out outweigh costs. On 13 June 2008, the MCE issued a Smart Meter Decision Paper, which committed to placing an obligation on DNSPs to roll-out smart meters where a jurisdictional implementation date has been set.²

The MCE's Statement of Policy Principles on smart meters and the Smart Meters Act³ were developed to implement the MCE's June 2008 Smart Meter Decision Paper.

The Smart Meters Act enables Energy Ministers in participating jurisdictions to make a determination to require DNSPs operating predominately in their jurisdiction to:

² MCE, 2008, *Smart Meter Decision Paper*, 13 June, p. 8.

³ On 29 October 2009, the *National Electricity (South Australia) (Smart Meters) Amendment Act 2009* (Smart Meters Act) passed the South Australian Parliament.

- roll-out smart metering services to customers; and/or
- conduct trials and pilots of smart meters.

The Smart Meters Act also defines roll-out responsibilities and provides high level guidance on the scope of roll-outs mandated by Ministerial determination. However, under this Act each jurisdictional Minister will retain discretion over how mandates are applied to DNSPs operating in their jurisdiction and the timing of any roll-outs or pilots, to allow Ministers to reflect differing jurisdictional circumstances. A Ministerial determination under the Act has the effect of changing the regulatory obligation on DNSPs, triggering a mechanism for the recovery of efficient direct costs in accordance with the Rules.⁴

The Smart Meters Act will be supported by a transitional Rule which will specify that regulated DNSPs, in complying with a Ministerial determination, will be the exclusive providers of smart metering services. This Rule will only have effect in regards to Ministerial determinations to roll-out smart meters and is not intended to limit the development of longer-term metrology policy.

The Smart Meters Act and transitional Rule will not apply in Victoria. The existing legislative arrangements for smart meter roll-outs, including those relating to mechanisms for the recovery of smart metering costs, will continue to apply in Victoria.⁵

The MCE has also agreed to provide any legislative support necessary to ensure appropriate cost recovery for DNSPs for providing mandated infrastructure services.⁶ The MCE noted in its Smart Meter Decision Paper that DNSPs should receive regulatory cost recovery for direct costs associated with complying with any jurisdictional obligation, but that cost recovery should be limited and net of reasonably achievable network operational benefits to ensure these benefits are passed directly to consumers.⁷ The MCE also committed to review regulatory incentives to maximise cost transparency and the competitive purchase of meters and metering services.⁸ In particular, the MCE's Statement of Policy Principles on smart meters states that:

⁴ Minister for Energy (SA), Second Reading Speech - Smart Meters Bill, 9 September 2009

⁵ The regulatory arrangements for the mandated roll-out of smart meters in Victoria are set out in an August 2007 Order in Council made by the Victorian Governor in Council. An amending Order in Council was made on 25 November 2008, which provides for a pass through of metering costs incurred by DNSPs and requires the AER to determine the metering charges that should apply. In October 2009, the AER published its final determination on its 'Victorian advanced metering infrastructure review: 2009-11 AMI budget and charges applications', which set out the smart metering charges that will apply for 2010 and 2011 in Victoria.

⁶ MCE, 2008, *Smart Meter Decision Paper*, 13 June, p. 8.

⁷ Ibid.

⁸ Ibid.

“The regulatory framework for distribution network tariffs, consistent with the revenue and pricing principles, should ensure that distribution network service providers:

- (a) are able to recover in a transparent manner the costs directly resulting from meeting the mandated service standards for smart meters and the costs of their existing investment which has been stranded by any mandatory roll out; and
- (b) promptly pass on cost efficiencies resulting from the installation of smart meters to tariff classes affected by the costs of a smart meter roll-out.”⁹

Under the ToR, we are to have regard to the Smart Meters Act, the draft transitional Rule, MCE Statement of Policy Principles on smart meters, and the MCE June 2008 Smart Meter Decision Paper, in providing our advice.

1.3 Timetable for providing advice and next steps

We will undertake extensive consultation during the development of our advice with all relevant stakeholders. Two rounds of public consultation will be held, the first on this Draft Statement of Approach, and the second on our Draft Report. Public consultation will be supplemented with bilateral meetings with interested stakeholders to provide further stakeholder input to our assessment process.

The timetable for the provision of our advice is as follows:

Stage	Date
Release of Draft Statement of Approach	17 December 2009
Close of submissions on Draft Statement of Approach	5 February 2010
Release of Final Statement of Approach	End February 2010
Release of Draft Report and draft Rules	May 2010
Close of submission on Draft Report and draft Rules	July 2010
Submit Final Report to MCE	By 31 August 2010

⁹ MCE, 2008, *Statement of Policy Principles- Smart Meters*, 13 June, p. 1

1.3.1 Interactions with other work streams

This request for advice is related to two other work streams currently being undertaken:

- the Commonwealth Government's *'Smart Grid, Smart City Initiative'*, which seeks to implement a fully integrated smart grid at commercial scale to test the business case for smart grids and key technologies; and
- the Commission's Review of Demand Side Participation (DSP) in the NEM. The objective of this Review is to determine whether there are barriers or disincentives within the Rules for the efficient uptake of DSP in the NEM.

We will manage the interactions between this request for advice and these other related work streams and incorporate relevant findings into our assessment process.

1.4 Submissions on the Draft Statement of Approach

Submissions on the Draft Statement of Approach are requested by **5:00 pm, Friday 5 February 2010**.

We are particularly interested in views on:

- Our proposed approach to providing our advice, including our proposed decision making criteria and scenarios for assessment (see Chapter 2); and
- The issue for consideration that we have identified (see Chapter 3).

Specific questions for comment are outlined in Chapters 2 and 3 of this Paper. A summary list of these questions can be found in Chapter 4.

Submissions should contain the project reference code **"EPR0018"** in the subject heading.

Submissions may be sent electronically through the AEMC website at www.aemc.gov.au or in hardcopy to:

Australian Energy Market Commission

PO Box A2449

Sydney South NSW 1235

1.5 Structure of the Paper

The remainder of this Paper is structured as follows:

Chapter 2 – outlines our proposed approach to this request for advice, including our proposed decision making criteria and the scenarios we intend to use during our assessment process.

Chapter 3 – discusses our interpretation of the issues that need to be considered in providing the requested advice.

Chapter 4 – lists the specific questions outlined in Chapters 2 and 3 that we are particularly seeking feedback on.

Appendix A – contains the ToR.

Appendix B – provides a summary of the current framework for economic regulation for DNSPs.

Appendix C – provides an outline of the costs and benefits of smart metering infrastructure.

2 Proposed Approach and Decision Making Criteria

This Chapter outlines our proposed approach to providing the advice, and includes:

- Our proposed decision making criteria, which will guide the development of the advice; and
- Our proposed scenarios and variables, which we intend to use to understand the implications of a Ministerial determination under the current Chapter 6 Rules, test alternative cost recovery mechanisms, and develop our advice.

2.1 Approach to providing advice

The purpose of a mandated, accelerated smart meter roll-out is to provide the functionality of smart meters to the broadest possible range of residential and other small customers within a condensed timeframe. Where a Ministerial determination is made, smart meters are to be installed across the distribution network for all (or most) residential and small customers. Customers will not have the option to opt out of the roll-out. Therefore, the effects of the roll-out and its potential impacts on costs, prices and services will be extensive, reaching across the network and customer base.

The economic regulation of a mandatory deployment of smart metering infrastructure by DNSPs presents a number of challenges. The actual smart meter forms a small but integral part of the required infrastructure which also includes the operational and communication systems. Further, smart metering is a “joint product”, in which the realisation of potential benefits depend on co-ordinated action between metering suppliers, meter owners and operators, DNSPs, retailers, and market operators.

We recognise the importance, scope and complexity of the matters covered by the ToR. Our approach is to advise on how best to have an effective Rules-based process for the recovery of mandated smart metering costs, which is efficient and promotes outcomes consistent with the National Electricity Objective (NEO), the National Electricity Law (NEL) Revenue and Pricing Principles, and the MCE’s Statement of Policy Principles on smart meters.

We will have regard to the characteristics of a smart meter roll-out that may impact the effectiveness of cost recovery arrangements. Importantly, the type and nature of the costs and benefits of the mandated smart meter infrastructure, and the degree of certainty in relation to each of those at the time of a Ministerial determination, may affect the effectiveness of the current Rules. Appendix C provides more information on the costs and benefits of smart meters.

Efficient cost recovery will require the regulator to consider both the costs of the infrastructure and also the associated benefits and cost savings, to determine the level of expenditure that should be recovered. It seems likely that any roll-out will follow a pattern in which design, equipment purchase and implementation costs are incurred up-front. Cost savings will occur later in time and will arise from efficiencies in the operation of the network, demand-related resource savings flowing

from more efficient Time of Use (TOU) pricing, and other possible productivity gains or resource savings due to an expanded range of energy services available to customers.

However, there is the potential for considerable uncertainty about the long term costs and benefits associated with smart meter infrastructure. A recent report by the Victorian Auditor-General documented the difficulties encountered in the large scale roll-out of smart meters in that jurisdiction.¹⁰ Deriving accurate cost estimates has been a particular concern, caused in part by delays in achieving the required level of operational performance in equipment and support systems, among other reasons.

To a large extent, this uncertainty may be expected to be addressed through the outcomes of smart meter trials. The mandated smart meter trials should help to confirm the findings of the cost-benefit analysis, reduce the range of uncertainty and inform whether a roll-out should proceed, and also inform the development of roll-out implementation plans to maximise benefits. However, where uncertainty as to either or both of the magnitude of costs and benefits of a roll-out persist, this presents a substantial difficulty for the regulator in determining an appropriate level and profile of recoverable net expenditure.

If the capturing of operational benefits requires a change in behaviour by the DNSP, rather than flowing 'automatically' as a result of the roll-out, then it may become difficult for the regulator to determine the expected operational cost savings during its decision making process.

Another characteristic of any mandated roll-out is that it is not the usual decision-making format for the majority of network services. The normal framework is where the DNSP, taking the role of primary decision-maker, develops and documents a price-service offer that incorporates cost estimates and service outcomes that are then assessed by the regulator. For a mandated roll-out there is a shift in the position of the DNSP from that of an initiator of proposals, required by the Rules to document and commit to cost and service outcomes, to that of an agent of the Minister. In preparing our advice, we are aware of the need to ensure that responsibilities and accountabilities are properly aligned to provide for the most appropriate outcome.

We will also remain mindful of the need to maintain an appropriate balance between prescription in the Rules in relation to specific issues (such as mandated smart meter roll-outs) and a more high-level Rules framework, which provides appropriate guidance and discretion to both DNSPs and the AER.

2.1.1 Scope of our advice

In preparing our advice, we will analyse how efficient cost recovery could be expected to be achieved under the current Rules, taking account of the AER's

¹⁰ Victorian Auditor-General, 2009, *Towards a 'smart grid' – the roll-out of Advanced Metering Infrastructure*, November.

established methods and approaches and how they could be expected to apply to the particular circumstances of a Ministerial determination. The framework for the economic regulation of DNSPs is outlined in Chapter 6 of the Rules and a summary of the relevant provisions in Chapter 6 is in Appendix B.

The ToR also indicate that additional or amended arrangements should be considered if it is concluded that the current Rules do not represent the approach that ‘most efficiently accommodates’ cost recovery.¹¹ As a result, in preparing our advice, we intend to consider both:

- the extent to which the current Chapter 6 Rules accommodate the recovery of efficient DNSP costs; and
- the more fundamental issue of whether the regulatory arrangements embodied in the Chapter 6 Rules are the most appropriate means of facilitating cost recovery, or whether an alternative regulatory approach may be more appropriate.

2.1.2 Proposed decision-making criteria for providing the advice

In providing our advice and recommending any Rule changes, we are required under the ToR to have regard to:

- the NEO;
- the MCE Statement of Policy Principles on smart meters;
- the Smart Meters Act and draft transitional Rule; and
- the MCE’s June 2008 Smart Meters Decision Paper.

The NEO states:

The objective of this Law is to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to –

- (a) price, quality, safety, reliability and security of supply of electricity; and
- (b) the reliability, safety and security of the national electricity system.¹²

The NEO reflects the concept of economic efficiency with explicit emphasis on the long term interests of customers. It also covers the means by which the regulatory framework operates as well as its intended results.

Under the MCE’s Statement of Policy Principles on smart meters, it states that:

¹¹ Subject to paragraph 13.3 of the MCE TOR that excludes any further jurisdictional derogations.

¹² Section 7 of the NEL.

The regulatory framework for distribution network tariffs, consistent with the revenue and pricing principles, should ensure that distribution network service providers:

- (a) are able to recover in a transparent manner the costs directly resulting from meeting the mandated service standards for smart meters and the costs of their existing investment which has been stranded by any mandatory roll out; and
- (b) promptly pass on cost efficiencies resulting from the installation of smart meters to tariff classes affected by the costs of a smart meter roll-out.¹³

The MCE's Statement of Policy Principles provides high level guidance on the objectives for the cost recovery mechanism for mandated smart metering costs and reflects the decisions made in the MCE's June 2008 Smart Meters Decision Paper. Further discussion on the MCE's Smart Meters Decision Paper, the Smart Meters Act and draft transitional Rule can be found in Chapter 1.

We will also have regard to the Revenue and Principles in the NEL.¹⁴ One of the Principles state that a regulated network service provider should be provided with a reasonable opportunity to recover at least the efficient costs the operator incurs in providing direct control network services and complying with a regulatory obligation or requirement or making a regulatory payment.¹⁵

We have developed a set of decision making criteria which are consistent with our duty to have regard to the NEO. These criteria are relevant in assessing the effectiveness of the current Rules in accommodating cost recovery for mandated smart metering infrastructure; and in being able to take into account 'reasonably achievable network operational benefits' and pass those through to customers. These criteria will guide our approach and the development of our recommendations.

Our proposed decision making criteria for providing our advice are as follows:

- 1. Promotion of efficient management of costs** - the provision of metering services and the operation of the network is on a least cost basis in order to better achieve productive efficiency. The Rules need to provide incentives for the DNSP to minimise costs in deciding upon the design, purchase and implementation of equipment and software to meet its obligations under a Ministerial determination. The regulatory framework must provide signals for DNSPs to make appropriate investment decisions on smart meter infrastructure and reduce the risks of over and under investment.

¹³ MCE, 2008, *Statement of Policy Principles- Smart Meters*, 13 June, p. 1

¹⁴ Section 7A(2) of the NEL.

¹⁵ Direct Control network service comprises both standard control services and alternative control services.

2. **Appropriate allocation of risk, having regard to what DNSPs can control** - there are a number of risks associated with mandated investment in smart meter infrastructure, including the risk of costs being higher than forecast and the technological risks associated with making a substantial long term investment. The regulatory framework needs to ensure that such risks are appropriately identified and managed effectively, both between different parties and between different administrative processes, to deliver the best outcomes for customers.
3. **Support potential benefits being realised in practice** - the benefits of smart metering can be divided into two main categories: operational benefits and demand response benefits. The regulatory framework needs to ensure that the benefits are realised to the maximum extent possible and promptly passed through to customers, to ensure their long term interests are supported.
4. **Promotion of transparent, well informed and appropriate processes** - the regulatory process for determining the efficient costs and benefits associated with mandated smart meter infrastructure and the decision making of DNSPs should be transparent and open, with the opportunity for stakeholder input. The regulatory framework should also ensure that the regulator has the best possible information when making its determinations.
5. **Robust to the necessary range of possible applications** - the Rules for mandated smart meter infrastructure should be robust enough to accommodate all potential Ministerial determinations. The regulatory framework should also be consistent with the principles of good regulatory design and practice, in order to promote the stability and predictability of the framework and ensure that the framework is proportionate.
6. **Consistency in treatment across different type of costs** – a common framework should be applied to all costs incurred in the provision of regulated services to promote effective regulation. Any deviation in treatment, specifically in relation to mandated smart meter infrastructure, would have to be justified as being in the long term interests of consumers.

We are interested in stakeholder views on our decision making criteria. In particular:

1. Are our proposed decision making criteria appropriate for the development of our advice? Are there any additional criteria that should be included?

2.1.3 Proposed scenarios and variables

We propose to use scenarios to aid our analysis and the development of our advice. This will help to test our assessment of the issues which may arise from a Ministerial determination and to understand the potential implications of alternative cost recovery mechanisms.

At a general level there are two distinct scenarios for the consideration of cost recovery for a Ministerial smart meter determination:

1. the distribution determination process, where the Ministerial determination is known in advance of a DNSP submitting its regulatory proposal for a regulatory control period; and
2. the cost pass through process, where the Ministerial determination is made and comes into effect part-way through a regulatory control period.

The ToR requires the Commission to explicitly consider how each of these potential scenarios would apply to either a Ministerial pilot determination or a Ministerial roll-out determination.

We intend to consider the following variables in our assessment of alternative scenarios:

- the timing of the Ministerial determination;
- the length of the mandated period for the roll-out;
- the uncertainty of anticipated costs and benefits; and
- the future contestability of metering services.

2.1.4 The timing of the Ministerial determination

In regards to this variable, we propose to consider two possible cases:

- the timing of the Ministerial determination is such that it allows the roll-out or pilot to be incorporated within the periodic distribution determination process conducted by the AER; or
- the timing of the Ministerial determination is such that incorporation of the impact of the roll-out or pilot within a periodic review is not practicable, creating a requirement for cost recovery to be pursued via other available mechanisms, such as the cost pass-through provisions.

2.1.5 The length of the mandated period

This variable relates to whether or not a mandated roll-out extends from one regulatory control period to another.

In particular, we will consider a scenario in which a mandated roll-out is initiated during one regulatory control period and extends into subsequent regulatory control periods. The costs during the first regulatory period will require cost recovery to be initiated under a separate mechanism (such as a pass through provision), but the costs in subsequent regulatory periods could be accounted for through the distribution determination process.

For all scenarios benefits will be considered to occur following the roll-out, and to extend beyond the end of the regulatory period in which costs are incurred.

2.1.6 The uncertainty of anticipated costs and benefits

The third variable concerns the question of whether a reliable and detailed project specification will be available at the time that the Ministerial determination is made. We will also consider the inherent uncertainty of costs and benefits for projects of this type and the risk that the costs and benefits of a roll-out or pilot may vary and change as the roll-out proceeds.

The range of possibilities that we intend to consider will include:

- Scenarios in which costs and benefits at the time of the Ministerial determination are relatively firm, or are considered to be subject to substantial uncertainty; and
- Scenarios in which as the roll-out proceeds, costs and benefits are revealed to be either as anticipated, or substantially more or substantially less.

Where the estimates are subject to a higher level of uncertainty, are contentious or are disputed by the DNSP, the task of judging the appropriate timing and level of offsetting cost savings will be made more difficult. This will be compounded where the realisation of operational benefits requires a change in practice by the DNSP, rather than flowing 'automatically' as a result of the roll-out. A key issue therefore is whether reliable estimates of the expected operational cost savings will be available to the regulator in making its decisions, either because of difficulties that are inherent to the roll-out, or because the roll-out is not a proposal developed and documented by the DNSP.

2.1.7 The future contestability of metering services

The final variable we propose to include in our scenario analysis concerns the status of metering services once the roll-out is complete.

The MCE has stated that it remains open to the further expansion of contestable metering beyond the roll-out period as technology and retail competition matures to support this, and has called for regulatory and operational arrangements in the national framework to allow for this future flexibility.¹⁶ Accordingly, we intend to assess scenarios which allow for:

- The contestability of residential and other small customer metering services following a Ministerial determination; and
- The continuation of DNSPs as the exclusive providers of smart metering services.

It is important that the framework for accommodating the efficient cost recovery for mandated smart meter infrastructure does not create any barriers against effective competition in metering services in the future.

¹⁶ MCE, 2008, *Smart Meter Decision Paper*, 13 June, p. 7.

We are interested in stakeholder views on the proposed scenarios and variables we intend to use. In particular:

2. Do our proposed scenarios capture the relevant range of potential circumstances that should be considered in preparing this advice? Are there other scenarios or variables that should also be considered?

3 Issues for Consideration

This Chapter outlines our interpretation of the issues which require consideration, in developing our advice to the MCE. Under the ToR we are not formally required to provide this additional discussion. However, we consider that a discussion of the issues raised in the ToR would assist stakeholders to understand how we intend to approach the provision of our advice. Further, as many of the issues in the ToR are complex, we consider that a discussion of issues may assist stakeholders in the development of their submissions to this Draft Statement of Approach.

Within this Chapter are a range of questions, which we are seeking specific feedback on. The issues which are discussed in this Chapter include:

- The recovery of efficient DNSP costs through the price determination process and the cost pass through process;
- The classification of metering services as alternative control services;
- Cost recovery by a DNSP of retailer costs;
- The obligation to account for operational network benefits;
- Incentives under the current regulatory regime;
- Consideration of alternative regulatory approaches; and
- The pricing methodologies of DNSPs.

These issues have been re-ordered slightly from their presentation in the ToR, where they relate to similar themes.

3.1 The recovery of efficient DNSP costs

The starting point for this analysis will be to assess the extent to which the current Chapter 6 Rules accommodate the recovery of efficient DNSP costs. In this context, the MCE has requested we consider:

- the interaction of the obligations imposed on DNSPs under sections 118B and 118D of the NEL amendments with the Revenue and Pricing Principles in the NEL and the operating expenditure objectives and capital expenditure objectives in clauses 6.5.6(a) and 6.5.7(a) of the Rules (Item 8.1 of the ToR); and
- the interaction of the obligations imposed on DNSPs under sections 118B and 118D of the NEL amendments and the definition of 'regulatory change event' for the purposes of the cost pass-through provisions in clause 6.6.1 of the Rules (Item 8.2 of the ToR).

These issues relate to how the economic regulatory framework set out in Chapter 6 of the Rules would apply to smart metering activities mandated by a Ministerial

determination. As discussed in Chapter 2, the mechanisms for the recovery of efficient costs need to be considered in regards to two distinct scenarios:

- cost recovery through the distribution determination process; and
- cost recovery through the pass through process during a regulatory control period.

The Rules requirements in regards to these two scenarios are discussed below.

3.1.1 The distribution determination process

The Minister's Second Reading Speech in relation to the Smart Meters Bill noted that a Ministerial smart metering determination has the effect of changing the regulatory obligations on DNSPs, triggering a mechanism for the recovery of efficient direct costs in accordance with the Rules.¹⁷

Under the NEL Revenue and Pricing Principles, a regulated network service provider should be provided with a reasonable opportunity to recover at least the efficient costs the operator incurs in:

- providing direct control network services; and
- complying with a regulatory obligation or requirement or making a regulatory payment.¹⁸

Under the operating and capital expenditure objectives in the Rules, a DNSP's building block proposal for standard control services must include (amongst other factors), the total forecast operating and capital expenditure for the regulatory control period, which the DNSP considers is required to comply with all applicable regulatory obligations or requirements associated with the provision of standard control services.¹⁹ The AER is required to accept the DNSP's forecast operating and capital expenditure if it is satisfied that the costs reasonably reflect the costs of achieving the operating and capital expenditure objectives and are efficient, prudent, and based on a realistic expectation of the demand forecast and cost inputs.²⁰

The condensed time-frame for the roll-out means that the recovery of the 'stranded costs' associated with DNSPs' existing metering infrastructure will be a key issue for consideration. We note that under the roll-forward model which is applied to the regulatory asset base of DNSPs, once assets have entered the regulatory asset base,

¹⁷ Minister for Energy (SA), Second Reading Speech - Smart Meters Bill, 9 September 2009

¹⁸ Section 7A(2) of the NEL.

¹⁹ Clauses 6.5.6(a)(2) and 6.5.7(a)(2) of the Rules.

²⁰ Clauses 6.5.6(c) and 6.5.7(c) of the Rules.

assets that are later determined to be ‘stranded’ can not be removed.²¹ We will also need to consider the potential for DNSPs to re-sell their existing metering infrastructure following the roll-out of smart meters, and how the residual value of this existing infrastructure would be treated under the distribution determination process.

3.1.2 The cost pass through process

As noted above, the pass through provisions in clause 6.6.1 of the Rules provide a possible mechanism for cost recovery where cost recovery is required during a regulatory control period. An issue for consideration is therefore whether the obligations imposed under a Ministerial determination fall within the definition of ‘a regulatory obligation or requirement’.

We note that the question of whether a Ministerial determination falls under the definition of a ‘regulatory change event’ is one which was raised by stakeholders during consultation on the exposure draft of the Smart Meters Bill. In particular, stakeholders expressed concern that whilst an obligation appearing in the NEL would constitute a regulatory change event, it was not clear that an administrative instrument given power under the NEL would create the same legal obligation. In addition, stakeholders were concerned that a smart meter determination may not constitute a ‘change’ in obligation, as it was a ‘new’ obligation. In response, the MCE Standing Committee of Officials (SCO) noted its view that the proposed NEL amendments did create the necessary obligation and that a smart meter determination would fall within the scope of a ‘regulatory change event’ as defined in the Rules.²²

Also, we note the AER in its distribution determinations for ACT and NSW DNSPs has included a ‘smart meter event’ as an additional category of pass-through event, and has proposed that this category also be incorporated into the distribution determinations for Queensland and South Australian DNSPs.²³ We will assess the implications of these distribution determinations in developing our advice.

3.1.2.1 The materiality threshold for cost pass through

The ToR requests us to consider whether there is sufficient flexibility provided under the current Rules for the AER to determine an appropriate materiality threshold for the pass through of efficient costs associated with a Ministerial pilot metering determination. Stakeholders have previously raised a concern that the costs of

²¹ See clause 6.5.1 and schedule 6.2 of the Rules.

²² MCE SCO, 2009, *National Electricity Amendment Bill – Smart Meters: MCE Standing Committee of Officials Policy Response*, June, p. 8.

²³ The AER has issued Draft Distribution Determinations for both Queensland and South Australia, with Final Distribution Determinations in both cases due by the end of April 2010.

complying with a pilot determination may fall below the materiality threshold applied by the AER to pass-through events.²⁴

The Rules do not prescribe a materiality threshold to be applied by the AER in deciding whether to consider an application by a DNSP for the pass through of costs associated with a positive change event. However, the definition of a regulatory change event includes that it 'materially increases or materially decreases the costs of providing those services.' As a result, the AER has sought to outline its approach to materiality for pass through events through its distribution determination process. We note that in the context of transmission services 'material' is defined under the Rules as exceeding 1% of the maximum allowed revenue for that year. Clause 6.2.8(a)(4) of the Rules allow the AER to publish guidelines on its likely approach to determining materiality in the context of a possible pass through event. No guidelines have been published to date.

In considering this issue, we will review how the application of the 'materiality' threshold for cost pass through events has been applied by the AER in the context of its distribution determinations, particularly in relation to pass through events that reflect a change in regulatory obligations. The AER has stated in recent determinations for electricity DNSPs that it considers that different thresholds for materiality should be applied for different types of pass through events.²⁵

In general, the AER considers that a pass through event will have a material impact if the costs associated with the event would exceed 1% of the smoothed revenue requirement. However, in some circumstances, the AER notes that it may determine that a lower materiality threshold, that represents the administrative costs of assessing a pass through application, should apply.²⁶ In the case of the AER's recent determinations for NSW and ACT DNSPs, the AER has identified specific pass through events for which a low materiality threshold applies.

We will also consider the appropriate balance of prescription in the Rules in relation to materiality thresholds versus the exercise of discretion by the AER. In this regard we note that the issue of the materiality of regulatory change events applies more broadly than only to Ministerial smart meter determinations.

3.1.2.2 Timeframes for cost pass through

The ToR also seeks advice on whether the timeframes in the current Rules are appropriate in the context of a Ministerial pilot determination and/or a Ministerial roll-out determination.

²⁴ Discussed in *National Electricity Amendment Bill – Smart Meters*, MCE Standing Committee of Officials Policy Response, June 2009, p. 23.

²⁵ See for example AER, 2009, *New South Wales distribution determination 2009-10 to 2013-14: Final Decision*, April, p.280.

²⁶ AER, 2009, *Australian Capital Territory distribution determination 2009-10 to 2013-14: Final Decision*, April, p.280

Under the Rules a DNSP must submit a written statement to the AER within 90 business days of the occurrence of the pass through event. The written statement must include (amongst other things), the costs that the DNSP considers will be incurred as a consequence of the pass through event, together with supporting evidence.²⁷ The AER is able to extend this time limit if it is satisfied that the difficulty of assessing or quantifying the effect of the relevant pass through event justifies the extension.²⁸ The AER is required to make a determination in relation to the pass through amount within 60 business days.²⁹ There are no explicit provisions in the Rules for the AER to extend this timeframe.

We intend to consider the appropriateness of the above timeframes in the context of making a pass through determination for a Ministerial pilot determination and/or a Ministerial roll-out determination.

We consider that we will need to assess whether:

- the AER's current ability to extend the timeframe for a DNSP to make a pass through application adequately addresses concerns that DNSPs may have in regards to the time needed to assess the cost impacts of a Ministerial determination; and
- Whether the 60 business day timeframe for the AER to make a pass through determination is sufficient.

In considering these issues, we will consider the process leading to a Ministerial determination and whether information and analysis supplied by DNSPs and other stakeholders during that process will form a useful basis for any subsequent cost pass through application and AER determination.

We are interested in stakeholder views on our assessment of the distribution determination process and the pass through provisions in Chapter 6 of the Rules. In particular:

3. What issues may arise in regards to the recovery of the 'stranded costs' associated with DNSPs' existing metering infrastructure, following a mandated smart meter roll-out?
4. Are there any other issues that we should consider when assessing the current cost pass through provisions in the Rules, particularly in regards to the materiality threshold and timeframes that apply?

²⁷ Clause 6.6.1(c) of the Rules.

²⁸ Clause 6.6.1(k) of the Rules.

²⁹ Clause 6.6.1(e) of the Rules.

3.2 Classification of metering services as alternative control services

The ToR requires us to consider the implications for cost recovery for metering services which are classified as alternative control services rather than standard control services.³⁰

The NEL Revenue and Pricing Principles apply to all direct control services. Under the Rules, direct control services are further divided into standard control services and alternative control services. The AER is required as part of its distribution determination process to classify services as direct control services or alternative control services.³¹

Currently metering services for small customers are classified as standard control services in the majority of jurisdictions.³² The exception is the ACT where metering services have been classified as alternative control services.³³ In Tasmania metering services are yet to be classified by the AER, but are currently included as part of the overall 'declared services.'³⁴

The control mechanism applying to metering services in the ACT is a 'building block' mechanism similar to that applying to standard control services, with the same pass through provisions as standard control services and also a specific 'smart meter' pass through event.³⁵

We intend to consider the implications for the cost recovery of services which are classified as alternative control services. We will consider the actual arrangements applying in the ACT, which reflect many of the same arrangements as those applying to standard control services. This evaluation will include a consideration of the pass through provisions, and the extent to which those existing arrangements would accommodate a pass through of efficient costs associated with a Ministerial determination (reflecting item 8.5 of the MCE's ToR).

³⁰ See item 8.4 of the ToR. The question of whether it is appropriate to unbundle metering services from distribution use of system charges is also raised in item 8.4 of the MCE ToR, and is discussed later in this Chapter.

³¹ Clause 6.12.1(1) of the Rules.

³² Part C in Chapter 6 of the Rules applies to standard control services only. The Rules in this part include the operating and capital expenditure objectives, the Rules applying to the AER's assessment of DNSPs' expenditure forecasts, the provisions in relation to depreciation, the efficiency benefit sharing scheme and the cost pass-through provisions.

³³ AER, 2009, *Australian Capital Territory distribution determination 2009-10 to 2013-14: Final Decision*, April.

³⁴ OTTER, 2008, *2007 Electricity Pricing Investigation – Final Report*, June, p. 5. Responsibility for distribution regulation in Tasmania is due to be transferred to AER at the next reset (ie, from 1 July 2012).

³⁵ AER, 2009, *Australian Capital Territory distribution determination 2009-10 to 2013-14: Final Decision*, April, p. 136.

At a broader level, we also intend to consider the potential for the existing arrangements to change going forward. In particular, we intend to consider the possibility that metering services in other jurisdictions may be classified as alternative control services, and may be regulated on a different basis to standard control services in the future. Specifically, we will consider the implications of such arrangements for cost recovery in relation to a Ministerial determination.

We are interested in stakeholder views on our assessment of the potential issues for cost recovery in those jurisdictions where metering services are classified as alternative control services. In particular:

5. With the exception of the current arrangements in the ACT, are there concerns with metering services becoming classified as alternative control services in other jurisdictions that we should consider in developing our advice?

3.3 Cost recovery by a DNSP of retailer costs

Item 8.3 of the ToR is focused on the issue of cost recovery by a DNSP of retailer costs associated with the provision of smart meter pilots or trials. Specifically the MCE has asked:

Whether the provisions of Chapter 6 of the Rules allow a distributor to enter into a contract (or other arrangement) with a retailer for the provision of retail services used in smart meter and direct load control pilots or trials and then allow the distributor to recover the associated fees charged by the retailer.

During consultation on the exposure draft of the Smart Meters Bill, stakeholders raised the issue of cost recovery for retail businesses that participate in mandated smart meter trials. In particular, stakeholders indicated that retailers may be reluctant to participate in trials and pilots of smart meters if the costs they incur cannot be recovered.³⁶

In its policy response, MCE SCO noted that there may be a need for retailers to provide the customer-facing aspects of pilots (e.g. customer billing) and that the costs associated with these functions should be able to be recovered by retailers. However, MCE SCO considered that making explicit provisions for retail cost recovery in the NEL was not appropriate, as jurisdictions are responsible for retail price regulation.³⁷ As an alternative, MCE SCO recommended to the MCE that the Commission be requested to consider the ability of a DNSP to contract a retailer to assist with the delivery of a pilot, and for the costs to be recovered through distribution charges.

³⁶ Discussed in *National Electricity Amendment Bill – Smart Meters*, MCE Standing Committee of Officials Policy Response, 2009, June, p. 24.

³⁷ MCE SCO, 2009, *National Electricity Amendment Bill – Smart Meters*, MCE Standing Committee of Officials Policy Response, June, p. 24.

In considering this issue, our initial view is that we will need to consider whether a Ministerial determination will include an obligation on DNSPs to procure retailer services that are required to undertake a smart meter trial and/or pilot. Where this obligation is clear, this may minimise the cost recovery risk to DNSPs who enter into a contractual relationship with retailers to provide these services, and the consequent risks for retailers of providing such services. A clear obligation may also minimise the risks for end use consumers of being exposed to undue costs.

We will also consider the regulatory issues which may be raised by related party contracts, as many DNSPs continue to share a common owner with the dominant retail business in the same geographic area.

We are interested in stakeholder views in regards to cost recovery for retailer costs. In particular:

6. What issues may arise in regards to the recovery of retailer costs via distribution charges for mandated smart metering pilots/trials?

3.4 The obligation to account for operational network benefits

The roll-out of smart meters has the potential to provide a range of business efficiency benefits for DNSPs. These include, for example, the avoided costs of routine manual meter reading, special reads, manual disconnections and reconnections, and the reduction in calls to faults and emergency lines. However, in the majority of cases these benefits are only expected to be realised once a large proportion of a smart meter roll-out has been completed. They will also accrue over a longer timeframe, as they relate to efficiencies from fundamental changes in a DNSP's operations going forward. This is in contrast to the relatively short timeframe in which the costs associated with the initial roll-out are expected to be incurred, and also means that these costs will be incurred prior to the benefits being realised.

In many instances, the realisation of the network benefits from a smart meter roll-out will require a change in the way that DNSPs conduct their operations, as largely benefits will not be automatically realised as a consequence of the roll-out. Further, there are likely to be additional costs incurred by DNSPs from adapting their business practices to realise potential benefits. In addition, the extent of potential benefits remain uncertain, particularly until the results of pilots are concluded. This may make it difficult for external observers (including the regulator) to definitively conclude that the benefits which are being realised reflect the full quantum of benefits that are achievable by the DNSP.

The ToR requires us to consider:

- whether there is an obligation under the NEL and the Rules for the AER to take into account 'reasonably achievable network operational benefits' in determining efficient costs (Item 9.1); and

- whether the Rules provide the ability for the AER to take into account ‘reasonably achievable network operational benefits’ either during the distribution determination process or in making a pass through determination or both, and to request information sufficient for this purpose (Item 9.2).

In considering these issues, we intend to first assess the extent to which the consideration of ‘reasonably achievable network operational benefits’ is either required and/or facilitated by the current NEL provisions and the Chapter 6 Rules.

3.4.1 Consideration of network benefits under the distribution determination process

In considering whether to accept a DNSP’s expenditure forecast of mandated smart meter costs, the AER would be required to consider whether the roll-out of smart meters would be likely to change the efficient costs of achieving the operating and capital expenditure objectives and/or the costs that a prudent operator would require to achieve these objectives.³⁸

Our preliminary view is that where there are reasonably achievable network operational benefits that lower the cost of a DNSP’s services (e.g. the capability for remote meter reading is expected to lower the cost of meter reading services), then the AER would be required to consider these benefits as part of its assessment of expenditure forecasts under clauses 6.5.6 and 6.5.7 of the Rules. We intend to conduct further analysis to confirm this initial view, and to also consider the implications where metering services are classified as alternative control services (as discussed above).

3.4.2 Consideration of network benefits under the pass through process

We will also consider whether there is a similar obligation on the AER to consider reasonably achievable network operational benefits in regards to cost recovery via the pass through provisions in clause 6.6.1 of the Rules. Under the Rules, the definition of an ‘eligible pass through amount’ refers to the ‘increase in costs’ that the DNSP expects to incur, and does not explicitly refer to potential off-setting benefits or to the concept of ‘the overall change in costs’. However, there are provisions in the Rules for DNSPs or the AER to identify a ‘negative change event’ and to estimate the cost savings associated with this pass through event.

We intend to review the AER’s pass through determinations to date, and examine whether a positive pass through event has also been considered to have had an off-setting reduction in costs that has been considered by the AER in determining overall pass through amounts.

³⁸ See clauses 6.5.6 and 6.5.7 of the Rules.

3.4.3 Ability of the AER to assess network benefits

Under the ToR, we are required to consider not only whether there is an obligation on the AER to take into account reasonably achievable network benefits, but also whether the Rules provide the *ability* for the AER to take account of these benefits.

A related issue which is raised in the ToR is 'whether the framework allows the AER to obtain the necessary information to ensure benefits are being realised within a reasonable timeframe' (Item 12.3).

In considering this issue, we intend to also assess the ability of an economic regulator to determine the quantum of benefits that are 'reasonably achievable' in circumstances in which there is a high degree of uncertainty. In line with Item 12.3 of the ToR, we will consider what information will be available to the AER regarding the expected operational benefits of a roll-out. We note that in addressing potential difficulties with accommodating uncertainty within the regulatory cost recovery framework, it is likely to also be relevant to consider the role of alternative processes (such as the use of pilots) in addressing this issue.

We will also consider the appropriateness of any role for the AER in monitoring the outcomes of a roll-out, as appears to be canvassed by Item 12.3 in the ToR.

We are interested in stakeholder views in regards to the consideration of the operational network benefits that may arise from a smart meter roll-out. In particular:

7. How will the time delay between when smart metering costs are incurred and when benefits are realised, affect the distribution determination and cost pass through process?
8. What are the implications of the expected uncertainty, in relation to the quantum of benefits that can be achieved through a mandated smart meter roll-out, for the effectiveness of the existing Rules?
9. What type of information may be required by the AER to assess whether operational network benefits are being realised within a reasonable timeframe? Should the AER be required to adopt a monitoring role to assess whether the benefits anticipated at the time of a roll-out determination are being realised?

3.5 Incentives under the current regulatory regime

The ToR requests advice on the appropriateness of incentives under the existing regulatory regime to the specific circumstances of a mandated smart meter roll-out. Specifically the ToR requires us to consider:

- whether an efficiency benefit sharing scheme as provided for under clause 6.5.8 of the Rules is appropriate for an accelerated roll-out of smart meters, given the MCE decision that the efficiencies gained from a roll-out are to be passed on to customers 'promptly' (Item 11.1);

- whether the current incentive mechanisms incorporated in the Rules are sufficient to maximise the competitive purchase of meters and metering services (Item 11.2); and
- whether Chapter 6 of the Rules provides appropriate incentives for a DNSP to manage technology risks for the long-term benefit of customers (Item 11.3).

3.5.1 Efficiency Benefit Sharing Scheme

The Rules currently provide for the development of an efficiency benefit sharing scheme (EBSS) by the AER. The EBSS is required to cover operating expenditure and may (but need not) also cover capital expenditure. The AER issued its final decision in relation to the EBSS to be applied to electricity DNSPs in June 2008. The EBSS currently only covers a DNSP's operating expenditure.

The EBSS is intended to increase the incentives on DNSPs to make efficiency gains over and above the forecast of operating expenditure that is included within the building block revenue requirement for standard control services. It achieves this by allowing DNSPs to retain a portion of those gains for a period beyond the end of the regulatory period, rather than passing all of the gains through to customers at the time of the next regulatory review.³⁹ Under the EBSS customers do not receive the benefit of any efficiency gain as quickly as they would if the EBSS was not in place, but the scheme is intended to provide a greater incentive for the DNSP to make efficiencies, resulting in customers receiving the benefit of a greater amount of efficiency gains eventually.

In considering the appropriateness of an EBSS, we intend to assess the routes via which network efficiency benefits are passed through to customers under the current regulatory framework. As discussed above, where a smart meter roll-out changes the efficient cost of meeting the DNSP's expenditure objectives, then the Rules require the AER to take this into account in deciding whether to approve the DNSP's expenditure forecasts. It therefore appears likely that some of the network operational benefits would be passed directly to customers at the time of the next distribution determination as a result of a change in the assumed operating expenditure going forward, rather than being subject to the EBSS mechanism. In this context we note that the MCE agreed that cost recovery should be net of reasonably achievable operational benefits to ensure that these benefits are passed directly to consumers.⁴⁰

As discussed above, under the EBSS there is a trade-off between the timing of the pass through of benefits and the total amount of efficiencies achieved. We note the

³⁹ Specifically the EBSS allows the distributor to retain the operating efficiency gains made in any one year for five years following the year in which the efficiency gain was made, regardless of the year in which the gain was made.

⁴⁰ MCE, 2008, *Smart Meter Decision Paper*, 13 June.

reference in the ToR to the prompt pass through of benefits to consumers, where this is in their long term interest. We consider that the potential trade-off between a quicker pass through of benefits and the future level of efficient costs, requires further consideration as we develop our advice.

3.5.2 Incentive mechanisms in the Rules

The ToR also requests us to consider more generally whether the current incentive mechanisms in the Rules are sufficient to maximise the competitive purchase of meters and metering services. This is to better ensure that the costs of providing meters and metering services reflect efficient costs and consumers are not exposed to undue costs.

The building block approach specified under Part C of the Chapter 6 Rules provides incentives for efficiencies to be achieved in relation to both operating and capital expenditure. Under the building block approach, regulated revenues are determined periodically, and re-set only once every five years.⁴¹

We intend to consider the incentive mechanisms reflected in the Rules, in the context of expenditure following from a Ministerial determination. In particular, we will consider the key characteristics of that expenditure (e.g., the potentially high level of uncertainty and technology risks), in assessing the effectiveness of the current incentive arrangements in facilitating the revelation and recovery of the efficient costs associated with a Ministerial determination. This assessment is likely to be an important factor in considering whether the current arrangements represent the optimal approach to accommodating the recovery of efficient costs associated with a smart meter roll-out.

3.5.3 Incentives to manage technology risks

The ToR also requires us to consider whether Chapter 6 of the Rules provides appropriate incentives for a DNSP to manage technology risks for the long term benefit of customers (Item 11.3).

The delivery of a large scale roll-out of smart meters appears to involve some significant operational uncertainties and risks. These risks include technology risks, which may vary depending on the particular model and specification of smart meters and associated infrastructure that is adopted by each DNSP. Whilst a Ministerial determination will mandate a minimum functional specification for the smart meters to be rolled out, DNSPs are likely to retain discretion over the particular technology that is used to meet that specification. DNSPs may also opt to

⁴¹ Where businesses are able to reduce their expenditure below the levels expected at the time of the regulatory determination, they are able to retain the benefits of doing so during the regulatory period.

use technology which provides capabilities over and above the minimum specification.

In the absence of a mandated requirement to roll-out smart meters, DNSPs would themselves assess the risks associated with such a roll-out, and the associated benefits, and would then make a case for the investment to the AER. The presence of a mandate alters this allocation of responsibilities, and results in DNSPs being obligated to roll-out smart meters, regardless of their internal assessment of the risks of doing so. In this case the regulatory framework will determine the allocation of risk between DNSPs and their customers.

We also note that in general, where a business is asked to bear more risk, there would be a consequent increase in the rate of return allowed for that business. However, as the ToR expressly excludes any re-examination of the rate of return, we intend to assume that there will be no adjustment to the rate of return, and will consider options for the management of technology risk within this constraint.⁴²

We consider that the issue of technology risk is not limited to the premature failure of new technology. We consider that it will be important to clearly establish the types of technology risks that are of particular concern, in order to identify what factors may mitigate these risks.

We note that the degree of technology risk may reduce over time, as pilot studies are undertaken and further experience is accumulated by those jurisdictions that decide to proceed with a roll-out. The extent and materiality of technology risk at the time of a future Ministerial determination may therefore differ from any current assessment of that risk.

It is also important to recognise the interaction between the incentives under the regulatory framework to minimise the costs associated with a smart meter roll-out, and the party that bears the technology risk. At one extreme, if a DNSP is not exposed to any risk associated with its selection of a particular technology, then this may well lessen its incentives to consider technology risk in addition to price in making its purchasing decisions. We intend to consider the incentives to manage technology risk as one aspect of the broader assessment of the appropriateness of the current incentive mechanisms under the Rules.

⁴² ToR, Item 11.3.

We are interested in stakeholder views in regards to the incentives under the current regulatory regime. In particular:

10. Is an EBSS appropriate for a mandated roll-out of smart meters, considering the MCE's requirement for the prompt pass through of benefits to consumers?
11. To what extent are the current incentive mechanisms in the Rules likely to be effective in facilitating the revelation of recovery of efficient costs associated with a Ministerial determination?
12. What types of technology risks may DNSPs face in rolling out mandated smart metering infrastructure? What incentives do DNSPs have under the current regulatory regime to manage these risks?

3.6 Consideration of alternative regulatory approaches

Under the ToR, we are required to consider:

- the extent to which the existing economic regulatory framework accommodates cost recovery for a Ministerial determination; and
- whether the existing Rules 'most efficiently accommodates' the recovery of the efficient costs of mandated smart metering infrastructure.

As a result, we will also consider potential alternatives to the regulatory framework embodied in the existing Chapter 6 Rules, in providing our advice.

In considering this issue we will remain mindful of the need to maintain an appropriate balance between prescription in the Rules in relation to specific issues (such as mandated smart meter roll-outs) and a more high-level Rules framework that treats similar issues consistently. We will also have regard to proportionality in considering potential changes to the regulatory framework and the significance of the issues identified.

In assessing whether the existing economic regulatory framework *most efficiently* accommodates the recovery of efficient costs, we intend to consider the key characteristics of the expenditure associated with a smart meter roll-out or pilot, and the extent to which these characteristics differ from other DNSP expenditure covered by the Chapter 6 Rules. The expenditure associated with a smart meter roll-out determination is of a significant scale and is also currently subject to a degree of uncertainty, in relation to both the costs and associated benefits of any roll-out. We note that an aim of mandated smart meter pilots is to lessen the extent of this uncertainty. However, it is unlikely that the current uncertainty can be eliminated altogether. We will consider whether these characteristics imply a need to apply an alternative regulatory approach to this expenditure, or whether they would be more appropriately dealt with by processes sitting outside the regulatory framework for cost recovery.

In this regard, we will consider the cost recovery arrangements for mandated smart metering infrastructure in Victoria, put in place under an Order in Council, which

applies a different cost recovery mechanism to that reflected in the Chapter 6 Rules. We also intend to consider other appropriateness of other potential regulatory arrangements, such as the 'contingent project' mechanism for transmission investment in Chapter 6A of the Rules.

We are seeking stakeholder views in regards to alternative regulatory approaches.

In particular:

13. What alternative regulatory approaches should be considered in regards to the cost recovery of expenditure required to comply with a smart meter roll-out or pilot determination?

3.7 The pricing methodology of DNSPs

The ToR raises a number of specific issues in relation to the potential impact on tariffs arising from a Ministerial smart meter determination. These issues and how we intend to assess them, are discussed below.

3.7.1 The allocation of costs in setting tariffs

The significant scale of a smart meter roll-out means that the potential impact on costs and ultimately customer tariffs may be extensive. In acknowledgment of this potential impact, item 9.3 of the ToR requires us to consider:

Whether the framework provides for the efficient allocation of costs of a smart meter roll-out, which may include apportioning those costs against something other than a standardised cost per customer.

In assessing this issue we will consider what constitutes the 'efficient allocation of costs' under a smart meter roll-out, and the implications for how costs may most appropriately be apportioned. We will then consider how the current distribution pricing Rules in Part I of the Chapter 6 Rules may be applied in determining this cost allocation, and whether any modifications to these Rules may be warranted.

3.7.2 Mechanisms to smooth tariff impacts over time

One of the key characteristics of a smart meter roll-out is that the costs incurred in rolling out the meters and associated communications occurs up-front, whilst the benefits (including the network operational benefits) will only begin to be realised once a high proportion of the roll-out is complete. There is therefore a timing difference between when DNSPs incur costs and when benefits are realised. This timing difference has the potential to impact prices in a manner that may not be desirable. The ToR requires consideration of:

the need to minimise potential price impacts on customers caused by paying for the Smart Metering Infrastructure roll-out before benefits are realised (Item 12.2).

To address this issue, we will need to develop a clear understanding of the possible magnitude of the price impacts following a Ministerial determination. We also intend to consider the possible mechanisms to smooth tariffs. Item 12.1 in the ToR also explicitly requires us to consider one potential option for achieving tariff smoothing, which is the deferral of depreciation from one regulatory period to the next. Specifically the ToR requires us to consider:

Whether clause 6.5.5 of the Rules in relation to depreciation requires modification, to allow the AER to require a distributor to modify its proposed depreciation schedules in order to smooth the tariff impact of a smart meter roll-out decision (Item 12. 1).

Currently there is no provision in the Rules that would require a DNSP to alter its depreciation profile with the aim of smoothing tariff impacts over time.

In considering this issue, we intend to consider the desirability of adjustments to the depreciation profile of assets as a means to smooth tariff impacts over time, compared with alternative mechanisms that may achieve the same outcome. We will also consider how adjustments to the depreciation profile may be achieved and will consider the incentives on DNSPs to propose depreciation profiles that have this impact.

3.7.3 Unbundling metering charges from DUOS Charges

Item 8.4 of the ToR requires us to consider: ‘whether it is appropriate to unbundle metering services from distribution use of system charges.’

Our initial approach to this issue will be to consider the potential benefits that may result from such unbundling, including benefits associated with additional transparency for customers, and the implications for any future contestability of metering services.

In the event that we conclude that it would be appropriate to unbundle metering charges from distribution use of system (DUOS) charges, it would then be necessary for us to consider the additional step of how such unbundling might best be achieved. We note that the ability to unbundle metering charges is likely to depend on the prior step of classifying metering services as alternative control services. We therefore intend to review the current Rules in relation to the classification of services.

3.7.4 Network tariff methodologies

One of the benefits that is anticipated to result from a smart meter roll-out is the provision of more cost reflective tariff signals to end use customers. Such signals have the potential to facilitate the deferral of network investment, where customers

change their pattern of consumption as a result of such tariffs. This is an issue which has been raised under our recent Review of Demand Side Participation.⁴³

The extent to which there may be network-related demand-side benefits from a smart meter roll-out is a topic which has been widely debated. It is clear that to facilitate the realisation of such benefits, DNSPs would need to actively adopt a pricing methodology which incorporates TOU network tariffs and/or critical peak pricing.

We intend to consider the incentives that DNSPs have under the current regulatory framework to implement such pricing methodologies, including the extent to which they are able to retain the benefits of any resulting network deferral. We will also consider the application of the pricing principles in the current Chapter 6 Rules, including the requirement for DNSPs to take into account the long run marginal cost of the relevant service when determining tariffs.⁴⁴

It will also be important to consider the relationship between network business and end use customers. In all jurisdictions, customers who consume less than 160MWh currently receive a single bill from their retailer. DNSPs charge retailers for the use of their network, with retailers then passing the costs on to end-use customers. However, in passing through network charges retailers need not preserve the structure of charges levied by DNSPs. Therefore, we also intend to consider the extent to which retailers face incentives to pass through network tariff signals (including the risks to retailers in not passing the tariff signals through). We will also consider the potential options for facilitating the pass through of network tariff signals by retailers.

We are interested in stakeholder views in regards to the pricing methodologies of DNSPs. In particular:

14. Are there any particular mechanisms for smoothing tariff impacts over time that we should consider in developing our advice?
15. What potential issues may arise from the unbundling of metering charges from DUOS charges?
16. What incentives are there under the current regulatory regime for DNSPs to alter their tariff methodologies, to facilitate the realisation of the potential demand side benefits of mandated smart meters?

⁴³ AEMC, 2009, *Review of Demand Side Participation: Final Report*, 7 December.

⁴⁴ Clause 6.18.5(b) of the Rules.

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4 List of Questions for Comment

Issues	Questions for Comment
Chapter 2: Proposed Approach and Decision Making Criteria	
Proposed decision making criteria	1. Are our proposed decision making criteria appropriate for the development of our advice? Are there any additional criteria that should be included?
Proposed scenarios and variables	2. Do our proposed scenarios capture the relevant range of potential circumstances that should be considered in preparing this advice? Are there other scenarios or variables that should also be considered?
Chapter 3: Issues for Consideration	
Recovery of efficient DNSP costs	3. What issues may arise in regards to the recovery of the ‘stranded costs’ associated with DNSPs’ existing metering infrastructure, following a mandated smart meter roll-out? 4. Are there any other issues that we should consider when assessing the current cost pass through provisions in the Rules, particularly in regards to the materiality threshold and timeframes that apply?
Classification of metering services as alternative control services	5. With the exception of the current arrangements in the ACT, are there concerns with metering services becoming classified as alternative control services in other jurisdictions that we should consider in developing our advice?
Cost recovery by a DNSP of retailer costs	6. What issues may arise in regards to the recovery of retailer costs via distribution charges for mandated smart metering pilots/trials?
The obligation to account for	7. How will the time delay between when smart metering costs are

<p>operational network benefits</p>	<p>incurred and when benefits are realised, affect the distribution determination and cost pass through process?</p> <p>8. What are the implications of the expected uncertainty, in relation to the quantum of benefits that can be achieved through a mandated smart meter roll-out, for the effectiveness of the existing Rules?</p> <p>9. What type of information may be required by the AER to assess whether operational network benefits are being realised within a reasonable timeframe? Should the AER be required to adopt a monitoring role to assess whether the benefits anticipated at the time of a Ministerial roll-out determination are being realised?</p>
<p>Incentives under the current regulatory regime</p>	<p>10. Is an EBSS appropriate for a mandated roll-out of smart meters, considering the MCE's requirement for the prompt pass through of benefits to consumers?</p> <p>11. To what extent are the current incentive mechanisms in the Rules likely to be effective in facilitating the revelation of recovery of efficient costs associated with a Ministerial determination?</p> <p>12. What types of technology risks may DNSPs face in rolling out mandated smart metering infrastructure? What incentives do DNSPs have under the current regulatory regime to manage these risks?</p>
<p>Consideration of alternative regulatory approaches</p>	<p>13. What alternative regulatory approaches should be considered in regards to the cost recovery of expenditure required to comply with a Ministerial smart meter roll-out or pilot determination?</p>

Pricing methodologies of DNSPs	<p>14. Are there any particular mechanisms for smoothing tariff impacts over time that we should consider in developing our advice?</p> <p>15. What potential issues may arise from the unbundling of metering charges from DUOS charges?</p> <p>16. What incentives are there under the current regulatory regime for DNSPs to alter their tariff methodologies, to facilitate the realisation of the potential demand side benefits of mandated smart meters?</p>
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A MCE's Terms of Reference

MCE

Ministerial Council on Energy

CHAIR

The Hon Martin Ferguson AM MP
Minister for Resources and Energy

Telephone: (02) 6277 7930 Facsimile: (02) 6273 0434

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Dr John Tamblyn
Chairman
Australian Energy market Commission
PO Box A2449
SYDNEY SOUTH NSW 1215

19 NOV 2009

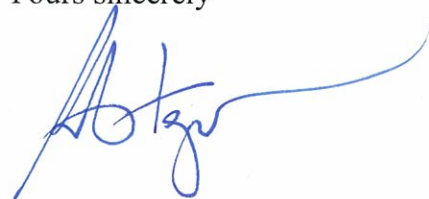
Dear Dr Tamblyn,

ADVICE ON WHETHER THE ECONOMIC REGULATION OF DISTRIBUTION SERVICES CONTAINED IN CHAPTER 6 OF THE NATIONAL ELECTRICITY RULES EFFICIENTLY ACCOMMODATES COST RECOVERY FOR MANDATED SMART METERING INFRASTRUCTURE

In a recent out of session decision, the Ministerial Council on Energy (MCE) agreed that I write to you to request that the Australian Energy Market Commission provide advice to the MCE on whether Chapter 6 of the National Electricity Rules efficiently accommodates cost recovery for smart metering infrastructure mandated by Ministerial Determination as contemplated in the *National Electricity (South Australia) (Smart Meters) Amendment Act 2009*.

The detailed Request for Advice, including a requirement to publish a Statement of Approach, is attached. We look forward to receiving your advice by no later than end August 2010.

Yours sincerely



Martin Ferguson

MCE Secretariat

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**MINISTERIAL COUNCIL ON ENERGY REQUEST TO THE AUSTRALIAN ENERGY
MARKET COMMISSION FOR ADVICE ON WHETHER CHAPTER 6 OF THE NATIONAL
ELECTRICITY RULES EFFICIENTLY ACCOMMODATES COST RECOVERY FOR
MANDATED SMART METERING INFRASTRUCTURE**

**Pursuant to Section 6(b) AUSTRALIAN ENERGY MARKET COMMISSION
ESTABLISHMENT ACT 2004 (SA)**

REQUEST FOR ADVICE

BACKGROUND

1. On 13 June 2008 the Ministerial Council on Energy (MCE) issued a Statement of Policy Principles (the Statement of Policy Principles) in relation to the mandated roll-out of smart meters. The Statement of Policy Principles contains the following principles:
 - 1.1. To promote competitive retail markets and maximise the benefits of a large scale accelerated roll-out of smart meters to residential and other small customers, there should be a national minimum functionality supported by a national regulatory framework for smart meters.
 - 1.2. To maximise the net benefits of a mandated roll-out of smart meters in a timely manner and capture the operational benefits for distribution network service providers, distribution network service providers will be legislatively obliged to roll out smart meters to some or all residential and other small customers in those jurisdictions where a mandated roll-out will take place.
 - 1.3. A distribution network service provider who is obliged to roll out smart meters should have exclusivity over meter provision and responsibility for related metering data provision in respect of the customers covered by the mandate during the period in which the distribution network service provider must complete that mandate.
 - 1.4. The regulatory framework for distribution network tariffs, consistent with the revenue and pricing principles, should ensure that distribution network service providers:
 - 1.4.1. are able to recover in a transparent manner the costs directly resulting from meeting the mandated service standards for smart meters and the costs of their existing investment which has been stranded by any mandatory roll out; and
 - 1.4.2. promptly pass on cost efficiencies resulting from the installation of smart meters to tariff classes affected by the costs of a smart meter roll-out.
2. Further to the Statement of Policy Principles, following two rounds of public consultation the MCE presented the *National Electricity (South Australia) (Smart Meters) Amendment Bill 2009* to the South Australian parliament which passed on 29 October 2009. The *National Electricity (South Australia) (Smart Meters) Amendment Act 2009* (the Smart Meter Act) facilitates and supports mandated trials, pilots and roll-outs of smart meters in participating jurisdictions. As set out in the second reading speech, a Ministerial smart metering determination will have the effect of changing the regulatory obligations on the distribution business, triggering a mechanism for recovery of efficient direct costs in accordance with the National Electricity Rules (the Rules). Ministers also recognised the importance of promptly passing on cost efficiencies resulting from smart metering to customers affected by the costs of a roll-out. This Request for Advice is to ascertain whether the interaction of the Rules with the Law could be improved to more efficiently accommodate Ministerial smart metering determinations.
3. The Smart Meter Act and the Statement of Policy Principles were developed to implement the MCE decision of June 2008 to place an obligation on distribution businesses to roll out smart meters where a jurisdictional implementation date has been set and to facilitate distribution businesses recovering the efficient direct costs of providing the mandated infrastructure and services.

4. The Smart Meter Act also supports the timely implementation of pilots with the objective of confirming smart metering costs and benefits in jurisdictions where these remain uncertain, facilitating distribution business recovery of efficient costs in delivering these pilots.
5. Pursuant to s6(b) of the *Australian Energy Market Commission Establishment Act 2004 (SA)* the MCE may request the Australian Energy Market Commission (AEMC) to provide advice.
6. Participating jurisdictions under the National Electricity Law (NEL) have agreed to the following Request for Advice by the AEMC.

REQUEST

7. In November 2009, MCE agreed to request the AEMC to provide advice to MCE on whether the existing economic regulation applying to distribution services set out in Chapter 6 of the National Electricity Rules (the Rules) most efficiently accommodates the recovery of the efficient costs of smart metering activities mandated by a Ministerial Determination. This advice and any proposed Rule changes (the Advice) is to have regard to:

- the National Electricity Objective;
- the MCE Statement of Policy Principles;
- the Smart Meter Act at Attachment A and draft initial rule at Attachment B; and
- the June 2008 MCE Smart Meters Decision Paper.

The Advice is to be prepared in accordance with the following requirements.

Issues to be addressed

Provision for recovery of efficient costs of smart meter roll-outs and pilots

8. The AEMC should consider whether the current Rules most efficiently accommodate the recovery of efficient distributor costs associated with meeting their obligations under a Ministerial pilot metering determination (which may include direct load control) or a Ministerial smart meter roll-out determination, via the distribution determination process and the cost pass through provisions in clause 6.6.1 of the Rules.

Specific issues to consider include:

- 8.1. The interaction of the obligations imposed on distribution network service providers under sections 118B and 118D of the proposed NEL amendments with the revenue and pricing principles in the NEL and the operating expenditure objectives and capital expenditure objectives in clauses 6.5.6(a) and 6.5.7(a) of the Rules;
- 8.2. The interaction of the obligations imposed on distribution network service providers under sections 118B and 118D of the proposed NEL amendments and the definition of 'regulatory change event' for the purposes of the cost pass through provisions in clause 6.6.1 of the Rules;
- 8.3. Whether the provisions of Chapter 6 of the Rules allow a distributor to enter into a contract (or other arrangement) with a retailer for the provision of retail services used in smart meter and direct load control pilots or trials and then allow the distributor to recover the associated fees charged by the retailer;
- 8.4. The implications for cost recovery of services being categorised as alternative control services rather than standard control services, and whether any modifications to the Rules are required to ensure recovery of efficient costs and whether it is appropriate to unbundle metering services from distribution use of system charges;
- 8.5. The implications for the recovery of efficient costs of implementing a future Ministerial pilot metering determination which may include direct load control and/or a Ministerial smart meter rollout determination for distribution price determinations that have already been made by the AER prior to the NEL amendments, including whether the costs of alternative control services can be recovered under the cost pass through mechanism if this was not anticipated in the determination;

Obligation and ability to take into account network benefits

9. The AEMC should consider:
 - 9.1. Whether there is an obligation under the NEL and the Rules for the AER to take into account 'reasonably achievable network operational benefits' in determining efficient costs;
 - 9.2. Whether the Rules provide the ability for the AER to take into account 'reasonably achievable network operational benefits' either during the distribution determination process or in making a pass through determination or both, and to request information sufficient for this purpose;
 - 9.3. Whether the framework provides for the efficient allocation of costs of a smart meter roll-out, which may include apportioning costs against something other than a standardised cost per customer.

Cost pass through provisions under clause 6.6.1

10. In respect of the cost pass through determination process under clause 6.6.1 of the Rules the AEMC should consider:
 - 10.1. Whether there is sufficient flexibility provided under the Rules for the AER to determine an appropriate materiality threshold for the pass through of distributor costs associated with a Ministerial pilot metering determination;
 - 10.2. Whether the timeframes in the current Rules for pass through applications and determinations are appropriate, in the context of a Ministerial pilot metering determination and/or a Ministerial smart meter rollout determination.

Incentives under the regulatory regime

11. It would be appropriate for the AEMC to consider:
 - 11.1. Whether an efficiency benefit sharing scheme as provided for under clause 6.5.8 of the Rules is appropriate for an accelerated roll-out of smart meters, given the MCE decision that the efficiencies gained from a roll-out are to be passed on to customers 'promptly';
 - 11.2. Whether the current incentive mechanisms incorporated in the Rules are sufficient to maximise the competitive purchase of meters and metering services; and
 - 11.3. Whether Chapter 6 of the Rules provides appropriate incentives for a distribution network service provider to manage technology risks for the long-term benefit of consumers without a re-examination of the Weighted Average Cost of Capital (WACC), which is outside the scope of this review. The risks to be managed include premature failure of a new technology.

Mechanisms to smooth impacts on tariffs over time

12. In light of MCE's June 2008 decision that the regulator should consider mechanisms to smooth any impact on tariffs over time, the AEMC should consider:
 - 12.1. Whether clause 6.5.5 of the Rules in relation to depreciation requires modification, to allow the AER to require a distributor to modify its proposed depreciation schedules in order to smooth the tariff impact of a smart meter roll-out decision, (this includes the depreciation of existing accumulation meter assets that are being replaced before the end of their economic life);
 - 12.2. The need to minimise potential price impacts on customers caused by paying for the Smart Metering Infrastructure (SMI) roll-out before benefits are realised;

- 12.3. Whether the framework allows the AER to obtain the necessary information to ensure benefits are being realised within a reasonable timeframe.

Assumptions

13. In developing the Advice requested above, the AEMC is to assume that:
 - 13.1. the provisions described in the transitional Rule have commenced;
 - 13.2. Rules, standards and the National Electricity Market technical procedures describing technical specifications, performance requirements, amendments to functions, service standards and national minimum functionality in respect of SMI have been made; and
 - 13.3. no further Rule changes for jurisdictional derogations in relation to delivery of smart meter trial, pilot and roll-out programs will be made.

Consultation

14. The AEMC must prepare and publish on its website a draft Statement of Approach by no later than 20 December 2009. The AEMC must invite public comment on the draft Statement of Approach. The AEMC must consider comments on the draft Statement of Approach in preparing the final Statement of Approach for publication.
15. The AEMC must prepare and publish draft Advice on the issues outlined in the Request for Advice, and invite public comment on the draft Advice. The AEMC must consider comments on the draft Advice in preparing the final Advice on issues outlined in the Request for Advice.

Recommendations

16. The Advice should make recommendations on any changes to the Rules necessary to ensure the recovery of the efficient costs of mandated smart metering infrastructure and have regard to the prompt pass through of benefits to consumers, where this is in their long term interest.

Management of confidential information

17. The AEMC must manage confidential information provided in accordance with the requirements of section 24 of the AEMC Establishment Act 2004 and section 108 of the NEL.

Date by which advice is due

18. The AEMC must provide a copy of the final Advice to the MCE by end August 2010. The AEMC must also publish a copy of the final Advice on its website no later than two weeks after providing the Advice to MCE.

South Australia

National Electricity (South Australia) (Smart Meters) Amendment Act 2009

An Act to amend the *National Electricity (South Australia) Act 1996*.

Contents

Part 1—Preliminary

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- 2 Commencement
- 3 Amendment provisions

Part 2—Amendment of *National Electricity Law*

Division 1—Smart meter amendments

- 4 Amendment of section 2—Definitions
- 5 Insertion of Part 8A

Part 8A—Smart metering services

Division 1—Interpretation

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Division 2—Ministerial pilot metering determinations

- 118B Ministerial pilot metering determinations
- 118C Consultation with interested persons required before making Ministerial pilot metering determination

Division 3—Ministerial smart meter rollout determinations

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Division 4—Provisions applicable to Ministerial smart metering determinations

- 118F Compliance with Ministerial smart metering determinations
- 118G Minister of participating jurisdiction must consult with other participating jurisdiction Ministers
- 118H Content of Ministerial smart metering determinations
- 118I Publication and giving of Ministerial smart metering determinations
- 118J When Ministerial smart metering determinations take effect
- 118K AEMC must publish Ministerial smart metering determination it receives on its website

Division 2—Other related amendments

- 6 Insertion of section 90C
 - 90C South Australian Minister to make initial Rules related to smart meters

The Parliament of South Australia enacts as follows:

Part 1—Preliminary

1—Short title

This Act may be cited as the *National Electricity (South Australia) (Smart Meters) Amendment Act 2009*.

2—Commencement

- (1) This Act will come into operation on a day to be fixed by proclamation.
- (2) Section 7(5) of the *Acts Interpretation Act 1915* does not apply to this Act or to a provision of this Act.

3—Amendment provisions

In this Act, a provision in Part 2 amends the *National Electricity Law* set out in the Schedule to the *National Electricity (South Australia) Act 1996*.

Part 2—Amendment of *National Electricity Law*

Division 1—Smart meter amendments

4—Amendment of section 2—Definitions

- (1) Section 2, definition of *additional Minister initiated Rules*—delete "or section 90B" and substitute:

, section 90B or section 90C
- (2) Section 2—after the definition of *Ministerial Gazette notice* insert:

Ministerial pilot metering determination means a determination made under section 118B;

Ministerial smart metering determination means—

 - (a) a Ministerial smart meter rollout determination; or
 - (b) a Ministerial pilot metering determination;

Ministerial smart meter rollout determination means a determination made under section 118D;
- (3) Section 2—after the definition of *shared transmission service* insert:

smart meter amendments means the amendments to this Law made by section 5 of the *National Electricity (South Australia) (Smart Meters) Amendment Act 2009* of South Australia;

5—Insertion of Part 8A

After Part 8 insert:

Part 8A—Smart metering services

Division 1—Interpretation

118A—Definitions

In this Part—

relevant customer means a person who consumes electricity through a supply point connected to a distribution system owned, operated or controlled by a regulated distribution system operator to which a Ministerial smart metering determination applies;

required smart metering infrastructure means smart metering infrastructure that is specified under the Rules to be required smart metering infrastructure;

smart meter assessment means an assessment of the costs and benefits, or operational performance, or both, of different smart metering infrastructure and other related technologies, including devices designed to enable direct load control;

smart metering infrastructure means infrastructure (and associated systems) associated with the installation and operation of remotely read electricity metering and communications, including interval meters designed to transmit data to, and receive data from, a remote locality;

smart metering services means services provided by means of required smart metering infrastructure that are specified as smart metering services under the Rules;

smart meter trials means trials of smart metering infrastructure and other related technologies, including devices designed to enable direct load control.

Division 2—Ministerial pilot metering determinations

118B—Ministerial pilot metering determinations

- (1) A Minister of a participating jurisdiction may make a determination that requires a regulated distribution system operator that earns most of its revenue from the provision of electricity network services provided by means of a distribution system situated partly or wholly in that participating jurisdiction to conduct smart meter trials or undertake a smart meter assessment (or both).
- (2) In making a Ministerial pilot metering determination, the Minister must have regard to—
 - (a) the national electricity objective; and

- (b) any comments or submissions made to the Minister as part of the consultation conducted under section 118C.
- (3) A Ministerial pilot metering determination must specify the regulated distribution system operator, or the class of regulated distribution system operator to which the determination applies (the *relevant operator or relevant operators*).
- (4) Without limiting subsection (1), a Ministerial pilot metering determination may—
 - (a) specify minimum standards of performance and service that must be met or investigated by the relevant operator or relevant operators in conducting smart meter trials;
 - (b) specify the nature and timing of the smart meter trials;
 - (c) in relation to information derived from a smart meter trial or a smart meter assessment, require the relevant operator or relevant operators to—
 - (i) subject to any conditions specified in the determination, provide that information to a person specified in the determination; or
 - (ii) make such information publicly available.
- (5) A requirement of the kind referred to in subsection (4)(c) may require information that relates to a person—
 - (a) be provided to another person; or
 - (b) be made publicly available.
- (6) However, a requirement referred to in subsection (4)(c) must not require the relevant operator to make the information publicly available in a manner that identifies the person to whom the information relates unless the relevant operator has the written consent of the person to do so.
- (7) Subsection (6) does not apply to information that is in the public domain.

118C—Consultation with interested persons required before making Ministerial pilot metering determination

Before making a Ministerial pilot metering determination, the Minister must consult with a person or body that the Minister considers has an interest in the determination.

Division 3—Ministerial smart meter rollout determinations

118D—Ministerial smart meter rollout determinations

- (1) A Minister of a participating jurisdiction may make a determination about the provision of smart metering services by a regulated distribution system operator that earns most of its revenue from the provision of electricity network services provided by means of a distribution system situated partly or wholly in that participating jurisdiction.
- (2) In making a Ministerial smart meter rollout determination, the Minister must have regard to—
 - (a) the national electricity objective; and
 - (b) any submissions made to the Minister as part of the consultation conducted under section 118E.
- (3) A Ministerial smart meter rollout determination must not be inconsistent with the Rules.
- (4) A Ministerial smart meter rollout determination must—
 - (a) specify the regulated distribution system operator, or the class of regulated distribution system operator to which the determination applies (the *relevant operator or relevant operators*); and
 - (b) specify any of the following or a combination of any of the following in relation to which the relevant operator or relevant operators must provide smart metering services:
 - (i) the minimum number of relevant customers;
 - (ii) the class of relevant customers;
 - (iii) the minimum number of supply points; and
 - (c) specify the date on which the determination expires.
- (5) Without limiting subsection (1), a Ministerial smart meter rollout determination may specify—
 - (a) the date or dates by which, and the location at which, smart metering services, or different classes of smart metering services, must be provided;
 - (b) the date or dates by which required smart metering infrastructure, or different classes of smart metering infrastructure, become operational.
- (6) A Ministerial smart meter rollout determination has effect according to its tenor despite anything to the contrary in any agreement or contract.

118E—Public consultation required before making Ministerial smart meter rollout metering determination

Before making a Ministerial smart meter rollout metering determination, the Minister must consult with the public about the determination.

Division 4—Provisions applicable to Ministerial smart metering determinations

118F—Compliance with Ministerial smart metering determinations

- (1) A regulated distribution system operator must comply with a Ministerial smart metering determination that applies to the operator.
- (2) A regulated distribution system operator incurs, by complying with a Ministerial pilot metering determination, no liability for breach of contract, breach of confidence or any other civil wrong.

118G—Minister of participating jurisdiction must consult with other participating jurisdiction Ministers

A Minister of a participating jurisdiction must consult with the Ministers of the other participating jurisdictions before making a Ministerial smart metering determination.

118H—Content of Ministerial smart metering determinations

A Ministerial smart metering determination—

- (a) may be of general or limited application;
- (b) may differ according to differences in time, place and circumstances.

118I—Publication and giving of Ministerial smart metering determinations

As soon as practicable after a Ministerial smart metering determination is made the determination—

- (a) must be published in the South Australian Government Gazette; and
- (b) must be given to—
 - (i) every regulated distribution system operator to which it applies; and
 - (ii) the AER; and
 - (iii) the AEMC.

118J—When Ministerial smart metering determinations take effect

A Ministerial smart metering determination has effect on and after the day specified in the determination for the period specified in the determination.

118K—AEMC must publish Ministerial smart metering determination it receives on its website

The AEMC must publish a Ministerial smart metering determination on its website as soon as practicable after receiving it.

Division 2—Other related amendments

6—Insertion of section 90C

After section 90B insert:

90C—South Australian Minister to make initial Rules related to smart meters

- (1) The Minister in right of the Crown of South Australia administering Part 2 of the *National Electricity (South Australia) Act 1996* of South Australia (the *South Australian Minister*) may make Rules for or with respect to either or both of the following subjects:
 - (a) the smart meter amendments;
 - (b) any other subject contemplated by, or consequential on, the smart meter amendments.
- (2) Rules may only be made under subsection (1) on the recommendation of the MCE.
- (3) Section 34(3) applies to Rules made under subsection (1) in the same way as it applies to Rules made by the AEMC.
- (4) As soon as practicable after making Rules under subsection (1), the South Australian Minister must—
 - (a) publish in the South Australian Government Gazette notice of the making of the Rules stating the date of commencement of the Rules or, if different Rules commence at different times, the various dates of commencement; and
 - (b) make the Rules publicly available.
- (5) Once the first Rules have been made under subsection (1), no further Rules can be made under that subsection.

**National Electricity Amendment (Ministerial Smart
Meter Roll Out Determinations) Transitional Rule
2009**

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Sixth Draft
10/08/2009

**National Electricity Amendment
(Ministerial Smart Meter Roll Out
Determinations) Transitional Rule 2009**

1 Title

This Rule is the *National Electricity Amendment
(Ministerial Smart Meter Roll Out
Determinations) Transitional Rule 2009*.

2 Commencement

This Rule commences operation on [].

3 Amendment of National Electricity Rules

The National Electricity Rules are amended as set out in Schedule 1.

SCHEDULE 1

[1] New Rule 11.28—Ministerial Smart Meter Roll Out Determinations

After Rule 11.27 insert:

11.28 Ministerial Smart Meter Roll Out Determinations

11.28.1 Definitions

In this rule 11.28:

relevant commencement date, for a relevant *metering installation*, means the day on which the Ministerial smart meter roll out determination that applies to the relevant *metering installation* takes effect.

relevant *metering installation* has the meaning given by rule 11.28.2.

specified amount means the amount assigned to variable "y" in Schedule 3 of the *metrology procedure* in relation to a participating jurisdiction.

supply point means a supply point—

- (1) that is a *connection point* connected to the distribution system of a regulated distribution system operator; and
- (2) through which the regulated distribution system operator is required to provide smart metering services in accordance with a Ministerial smart meter roll out determination.

volume consumption means the volume of *energy* consumed by a customer through the relevant supply point calculated in accordance with Schedule 2 of the *metrology procedure*.

11.28.2 Meaning of relevant *metering installation*

- (a) For the purpose of this rule, a **relevant *metering installation*** is a *metering installation* for a supply point in respect of which the volume consumption of the customer is less than the specified amount.
- (b) For the purpose of this rule, a **relevant *metering installation*** does not include:
- (1) a *metering installation* installed for a supply point before the relevant commencement date in respect of which a *Market Participant* is the *responsible person*; or
 - (2) a *metering installation* referred in paragraph (a) that is installed for the supply point referred to in that paragraph on and after the relevant commencement date in accordance with the ordinary replacement cycle of that *Market Participant*; or
 - (3) a *metering installation* located at a *high voltage connection point*.

11.28.3 Period of application of rule to relevant *metering installations*

This rule 11.28:

- (a) applies to a relevant *metering installation* on the day the Ministerial smart meter roll out determination that applies to the relevant *metering installation* takes effect; and
-

- (b) ceases to apply to a relevant *metering installation* on the day the Ministerial smart meter roll out determination that applies to the relevant *metering installation* ceases to have effect.

11.28.4 Designation of responsible person

Despite clauses 7.2.2 and 7.2.3, the *responsible person* for a relevant *metering installation* is the regulated distribution system operator to whom the Ministerial smart meter roll out determination (that applies to that relevant *metering installation*) applies.

11.28.5 Agency data collection systems and agency metering databases

- (a) If *AEMO* uses:
 - (1) *agency data collection systems* under clause 7.3.5(c); or
 - (2) *agency metering databases* to form part of the *metering database* under clause 7.9.1(b),

in respect of *metering data* from a relevant *metering installation*, the person engaged by *AEMO* under clause 7.9.1(b1) to provide the *agency data collection systems* and the *agency metering databases* must be selected by the *responsible person* for the relevant *metering installation*.

- (b) Paragraph (a) applies despite anything to the contrary contained in any contractual or other arrangement between a *Market Participant* and *AEMO*.

**11.28.6 Remote acquisition of data by the
responsible person**

For the purposes of clause 7.9.2(a):

- (a) the *responsible person* for a relevant *metering installation* (and not *AEMO*) is responsible for the *remote acquisition of metering data* from a relevant *metering installation*;
 - (b) *AEMO* is responsible for storing the *metering data* referred to in paragraph (a) as *settlements ready data* in the *metering database*; and
 - (c) the *responsible person* for a relevant *metering installation* must provide the *metering data* remotely acquired under paragraph (a) to *AEMO*.
-

B Current Framework for Economic Regulation of DNSPs

The current framework for the economic regulation of DNSPs is outlined in Chapter 6 of the Rules. Savings and transition Rules relating to specific provisions for Queensland, NSW and Victoria are found Chapter 11 of the Rules. This appendix contains a summary of the key provisions in Chapter 6 and relevant AER guidelines, which relate to the MCE's request for advice.

B.1 Distribution Determination Process

Metering services in the NEM for small customers are regulated as standard control services, with the exception of the ACT, where they are regulated as alternative control services.

Standard control services are regulated under a building blocks approach, which is specified in detail under Chapter 6 of the Rules. In contrast, there is limited guidance in the Rules regarding how alternative control services are to be regulated and the AER is able to exercise discretion in determining the form of control that applies to those services through its distribution determinations.⁴⁵ Clause 6.2.6(c) of the Rules provides that the control mechanism for alternative control services may use elements of the building block approach used for standard control services, with or without modification.

The revenues and prices that DNSPs are able to recover for both standard control and alternative control services are determined through the distribution determination process. The current distribution determination process is based on a 'propose-respond' model where the AER is required to assess a DNSP's regulatory proposal and accept certain parts of it unless it fails to meet specified criteria.

The procedures for making a distribution determination are set out in Part E of Chapter 6 of the Rules. DNSPs are required to submit a regulatory proposal to the AER at least 13 months prior to the expiry of their current distribution determination.⁴⁶ This regulatory proposal must include, amongst other elements, a classification proposal which outlines how the DNSP considers its services should be classified, and a building block proposal. Distribution determinations must be made by the AER at least two months before they are to apply. Generally distribution determinations apply for a regulatory control period of five regulatory years.

B.1.1 Classification of services

Under clause 6.2.1 of the Rules, the AER classifies distribution services provided by DNSPs as either:

⁴⁵ See clause 6.2.6(b) of the Rules.

⁴⁶ Clause 6.8.2(b)(1) of the Rules.

- Direct control services (which may be further sub divided into standard control services or alternative control services); or
- Negotiated control services.

If the AER determines not to classify a distribution service, the service will not be regulated under the Rules. The AER may group distribution services together for the purposes of classification.⁴⁷ In classifying a distribution service, the AER is required to have regard to:

- The form of regulation factors, which are outlined in section 2F of the National Electricity Law (NEL). These factors relate to the level of competition in a market for electricity network services and include factors such as the elasticity of demand for the service and the extent of market power possessed by the service provider;
- The previous form of regulation and classification that was applied to the relevant service;
- The desirability for consistency in the form of regulation for similar services both within and beyond the relevant jurisdiction; and
- Any other relevant factors.⁴⁸

In considering whether to classify a direct control service as a standard control service or an alternative control service, the AER is required to have regard to:

- The potential for development of competition in the relevant market and how the classification might influence that potential;
- The possible effects of the classification on the administrative costs of the AER, the DNSP and users or potential users;
- The previous regulatory approach that was applied to the relevant service;
- The desirability of a consistent regulatory approach to similar services both within and beyond the relevant jurisdiction;
- The extent the costs of providing the relevant service are directly attributable to the customer to whom the service is provided; and
- Any other relevant factor.⁴⁹

The AER's classification of services forms part of its distribution determination and applies for the term of the relevant regulatory control period.⁵⁰

⁴⁷ Clause 6.2.1(b) of the Rules.

⁴⁸ Clause 6.2.1(c) of the Rules.

⁴⁹ See clause 6.2.2(c) of the Rules.

The Rules provide the AER with a degree of flexibility when determining the control mechanism (e.g. revenue cap, price cap, tariff basket control etc) that should apply to each type of service. However, the basis of the control mechanism for standard control services must be of the prospective CPI-X form or some other incentive-based variant of this form.⁵¹

B.1.2 Building Blocks Approach

The building blocks approach for standard control services is set out in Part C of Chapter 6 of the Rules. Under the building blocks approach, the AER is required to calculate an annual revenue requirement for standard control services for each regulatory year of a regulatory control period, which must include:

- indexation of the regulatory asset base;
- return on capital, depreciation, and corporate tax for that year;
- any revenue increments or decrements arising from incentive schemes (e.g. efficiency benefit sharing schemes) or the application of a previous control mechanism; and
- the forecast operating expenditure for that year.⁵²

The required contents of a building block proposal are set out in clause S6.1 of the Rules.

B.1.2.1 Roll Forward of the Regulatory Asset Base

Clause 6.5.1(d) of the Rules requires the AER to publish a model for the roll forward of the regulatory asset base (RAB) for distribution systems (i.e. 'roll forward model'). The RAB for a distribution system is the value of assets used by the DNSP to provide standard control services and is used to calculate the return on, and depreciation of, the capital invested in the DNSP.⁵³ The AER's current roll forward model for DNSPs was published in June 2008.⁵⁴

The roll forward model sets out how the RAB will be calculated from the beginning of one regulatory control period to the next regulatory control period, as well as between each regulatory year within each period.⁵⁵ Under clause S6.1.3(10) of the Rules, each DNSP is required to submit a completed version of the AER's roll forward model as part of its building block proposal. The values from the roll forward model are then used as inputs to the post tax revenue model where they are

⁵⁰ Clause 6.2.3 of the Rules.

⁵¹ Clause 6.2.6(a) of the Rules.

⁵² Clause 6.4.3(a) of the Rules.

⁵³ Clause 6.5.1(a) of the Rules.

⁵⁴ AER, 2008, *Final Decision: Electricity Distribution Network Service Providers: Roll Forward Model*, June.

⁵⁵ *Ibid*, p.3.

rolled forward from year to year using forecast data.⁵⁶ The post tax revenue model is used by DNSPs and the AER to propose and determine the annual revenue requirement for each regulatory year.

B.1.2.2 Depreciation

Under clause 6.5.5 of the Rules, depreciation for each regulatory year must be calculated on the value of assets to be included in the RAB. The annual regulatory depreciation allowance is an amortised value of the RAB, which reflects the nature of the asset over their economic life. Regulatory depreciation takes into account both (negative) straight-line depreciation and the (positive) annual inflation effect on the opening RAB. Depreciation must be calculated using depreciation schedules nominated by DNSPs in their building block proposals or schedules determined by the AER. Under clause 6.5.5(b) of the Rules, DNSPs' depreciation schedules must conform to the following requirements:

- the schedules must use a profile that reflects the nature of the assets over their economic life;
- the sum of depreciation over the economic life of the assets must be equivalent to the value of that asset initially included in the RAB; and
- the economic life and the depreciation method and rates must be consistent with those determined for the same assets on a prospective basis in the distribution determination for that period.

Where a depreciation schedule nominated by a DNSP does not conform to these requirements, the AER is able to determine the schedule that will apply.⁵⁷

B.1.2.3 Operating and Capital Expenditure

A DNSP's building block proposal must include total forecast operating and capital expenditure, which must be based on the operating and capital expenditure objectives outlined in clauses 6.5.6(a) and 6.5.7(a) of the Rules respectively. The AER is required to accept the DNSP's forecast operating and capital expenditure if it is satisfied that the costs reasonably reflect the costs of achieving the operating and capital expenditure objectives and are efficient, prudent, and based on a realistic expectation of the demand forecast and cost inputs.⁵⁸ In deciding whether or not it is satisfied with the DNSP's forecast operating and capital expenditure, the AER must have regard to the operating expenditure factors and the capital expenditure factors described in the Rules.⁵⁹

⁵⁶ Ibid.

⁵⁷ Clause 6.5.5(2)(ii) of the Rules.

⁵⁸ Clauses 6.5.6(c) and 6.5.7(c) of the Rules.

⁵⁹ See clause 6.5.6(e) of the Rules for the operating expenditure factors and clause 6.5.7(e) of the Rules for the capital expenditure factors the AER must consider.

B.2 Pass Through Process

The pass through provisions in the Rules provide an opportunity for DNSPs to recover efficient costs that could not reasonably be provided for in distribution determinations.

Under clause 6.6.1 of the Rules, DNSPs are able to seek the approval of the AER to pass through material increases in the costs of providing direct control services to network users during a regulatory control period. Where an event leads to a material decrease in costs, DNSPs are required to provide the AER with information on the nature of the cost savings achieved and the AER may make a determination to require DNSPs to pass through these cost savings to network users.

The Rules do not define what may constitute a “material” increase or decrease in costs. As a result, the AER has sought to outline its approach to materiality for pass through events through its distribution determination process.⁶⁰ Under the Rules, the AER is also able to publish a guideline on its approach to determining materiality for possible pass through events, but has not published one to date.⁶¹

Under the Rules, two categories of pass through events for electricity distribution are provided for:

- Defined events as set out in Chapter 10 of the Rules. These defined events include a: regulatory change event, service standard event, tax change event, terrorism event.
- Specific nominated events as proposed by DNSPs and approved by the AER as part of the distribution determination process. These additional pass through events will only apply to the regulatory control period to which the relevant distribution determination relates to.⁶² The Rules do not provide any guidance to the AER regarding the factors it should take into account when deciding whether to approve such additional pass through events.

These pass through events may be either a “positive change event” (i.e. an event which results in a material increase in a DNSP’s costs of providing direct control services) or a “negative change event” (i.e. an event which results in a material decrease in a DNSP’s costs of providing direct control services).

DNSPs are required to apply to the AER to pass through a pass through amount within 90 business days of the occurrence of the pass through event, and may only apply for pass through in regards to the two categories of pass through events

⁶⁰ In the AER’s recent *Final Decision: New South Wales Distribution Determination 2009-10 to 2013-14*, the AER indicated that it that it would generally consider that a pass through event will have a material impact if its costs: “exceed 1 per cent of the smoothed forecast revenue” in each of the years of the regulatory control period that the costs are incurred. However, it also should be noted that the AER in the same determination approved a smart meters event as a specific nominated pass through event and considered that the smart meters event would be considered material if the costs of the event exceeded the administrative costs of assessing the pass through application.

⁶¹ Clause 6.2.8(a)(4) of the Rules.

⁶² Clause 6.12.1(14) of the Rules.

discussed above.⁶³ The AER is able to extend this time limit if it is satisfied that the difficulty of assessing or quantifying the effect of the relevant pass through event justifies the extension.⁶⁴ The factors the AER must consider when making a determination on a pass through application are specified in clause 6.6.1(j) of the Rules, and include (amongst other factors) the actions taken by the DNSP to manage the risk of the pass through event occurring. For a positive pass through amount, the AER is required to make a determination in relation to the appropriate pass through amount within 60 business days of receiving an application.⁶⁵ There are no explicit provisions in the Rules for the AER to extend this timeframe.

B.3 Efficiency Benefit Sharing Scheme

Under clause 6.5.8 of the Rules, the AER is required to publish an Efficiency Benefit Sharing Scheme (EBSS) which provides for the fair sharing between DNSPs and users of the efficiency gains and losses derived from the operating expenditure of DNSPs and the forecast operating expenditure accepted or substituted by the AER. The AER may also develop an EBSS for efficiency gains and losses related to capital expenditure or distribution losses. The AER issued its final decision in relation to the EBSS to be applied to electricity DNSPs in June 2008.⁶⁶ The EBSS currently only covers a DNSP's operating expenditure and applies solely to standard control services.

The purpose of EBSS is to provide for continuous basis for efficiency incentives over an entire regulatory period by allowing profits or losses earned during a regulatory year to be carried over by a DNSP over a set number of years (carry over period). The EBSS is intended to increase the incentives on DNSPs to make efficiency gains over and above the forecast operating expenditure that is included within the building block revenue requirement for standard control services, irrespective of the regulatory year of the regulatory control period in which the gain was initiated. It achieves this by allowing DNSPs to retain a portion of efficiency gains over a carry over period beyond the end of the regulatory period, rather than passing all of the gains through to customers at the time of the next regulatory review in the following regulatory control period.⁶⁷ The EBSS operates by calculating an 'efficiency amount' which is then added to the building block revenue requirements in the following regulatory control period.

Under the EBSS customers do not receive the benefits of any efficiency gains as quickly as they would if the EBSS was not in place, but the scheme is intended to preserve incentives for the sharing of efficiency gains and losses between the DNSP

⁶³ Clauses 6.6.1(c) and (f) of the Rules

⁶⁴ Clause 6.6.1(k) of the Rules

⁶⁵ Clause 6.6.1(e) of the Rules

⁶⁶ AER, 2008, *Final Decision: Electricity Distribution Network Service Providers: Efficiency Benefit Sharing Scheme*, June.

⁶⁷ Specifically the EBSS allows DNSPs to retain the operating efficiency gains made in any one year for five years following the year in which the efficiency gain was made, regardless of the year in which the gain was made.

and users as the regulatory control period progresses, resulting in customers receiving the benefit of a greater amount of efficiency gains eventually.

B.4 Pricing Methodology

Under clause 6.18.2 of the Rules, DNSPs are required to submit a pricing proposal to the AER for each regulatory year of the regulatory control period. The information that a pricing proposal must contain is outlined in clause 6.18.2(b) of the Rules, and includes (amongst other information), the tariffs and tariff classes that will apply for the relevant regulatory year.

Separate tariff classes must apply for customers of standard control services and alternative control services.⁶⁸ The AER is required to formulate provisions in its distribution determinations, in accordance with defined principles in the Rules, which govern how customers should be assigned or re-assigned to tariff classes.⁶⁹

Pricing principles set out in clause 6.18.5 of the Rules outline how revenue should be recovered for each tariff class and tariff.

For each tariff class, the revenue which is expected to be recovered should lie on or between:

- The stand alone cost of serving customers who belong to this class; and
- The avoidable cost of not serving those customers.⁷⁰

Tariffs and charging parameters (i.e. constituent parts of each tariff) must take into account and be determined having regard to:

- the long run marginal cost of the service;
- the transaction costs associated with each tariff; and
- whether customers of the relevant tariff class are able or likely to respond to price signals.⁷¹

If a DNSP is not expected to recover the expected revenue, the DNSP is required to adjust its tariffs to ensure recovery of the expected revenue with minimum distortion to efficient patterns of consumption.⁷²

The expected weighted average revenue which will be raised for a tariff class in each regulatory year must not exceed the weighted average revenue for the previous year by more than the greater of:

⁶⁸ Clause 6.18.3(c) of the Rules.

⁶⁹ Clause 6.18.4 of the Rules

⁷⁰ Clause 6.18.5(a) of the Rules.

⁷¹ Clause 6.18.5(b) of the Rules.

⁷² Clause 6.18.5(c) of the Rules.

- the CPI-X limitation on any increase in the DNSP's expected weighted average revenue between the two regulatory years plus 2%; or
- CPI plus 2%.⁷³

Under clause 6.18.8 of the Rules, the AER is required to approve a DNSP's pricing proposal if the forecasts in the proposal are reasonable and if the proposal complies with the pricing rules in Part I of Chapter 6 of the Rules and any applicable distribution determination. If the AER considers that a pricing proposal does not meet the relevant requirements in the Rules, it may ask the DNSP to re-submit its proposal or it may amend the proposal itself.

Under the Rules, each DNSP is required to publish information on its pricing methodology on its websites, including its tariff classes, tariffs and charging parameters, and a statement of its expected price trends over the regulatory control period.⁷⁴

⁷³ Clause 6.18.6 of the Rules. Note this clause does not limit the extent that tariffs, for customers with remotely read interval metering, may vary according to the time or other circumstances of the customer's usage.

⁷⁴ Clause 6.18.9(a) of the Rules.

C The Costs and Benefits of Smart Metering Infrastructure

C.1 Smart Meter Infrastructure

The term smart meter applies where the meter is capable of two-way communications. It can provide consumption information in more detail than a traditional meter and a range of additional functions once the meter is connected to a communications network. By being capable of measuring and recording energy consumption in short intervals, smart meters can facilitate TOU tariffs, critical peak pricing and direct load control.

C.2 Costs and Benefits of Smart Meter Infrastructure

There are three main cost categories for smart meter infrastructure:

- **Capital costs of the meter:** The lifetime costs of meters can be sensitive to the discount rate and the assumed lifetime of the meters. Smart meters have a shorter technical life than traditional electromechanical meters and a lifetime of 15 years is typically assumed. There is also the cost of existing meters being stranded.
- **Installation costs:** The average installation costs tends to be depend on the roll-out schedule. Accelerating the roll-out schedule increases the costs of installation due to an increase in the number of physical installations over a shorter period of time. The coordination of the roll-out has an impact on the magnitude of this cost increase. If the roll-out is coordinated by region, travel time between sites can be minimised;
- **Communication and data systems:** This requires on-going operational expenditure and tends to be the most uncertain of the costs associated with smart meter infrastructure.

The benefits of smart metering can be divided into two main categories: operational benefits and demand response benefits. As with the costs of meters and metering systems, the magnitude of benefits is influenced by a number of factors, including the level of functionality, deployment speed, coordination and behavioural change.

- **Operational benefits:** The avoided cost of meter reading is one of the most significant operational benefits and is facilitated by the remote reading function. Deployment speed has an impact on operational benefits; in general, slower deployment can have an adverse effect on total benefits.

Other potential operational benefits include: better outage detection; faster response times to outages; improved quality of supply recording; and more accurate billing. There may also be a reduction in customer service costs due to a lower level of customer complaints. Smart meters may also lead to a reduction in non-technical electricity losses (e.g. from theft and tampering).

- **Demand response benefits:** Smart meters can influence customer demand in a number of ways: first, by facilitating direct load control of appliances; second, by facilitating the introduction of time varying prices; and third, by providing additional consumption information either via the meter, external display or directly from the supplier. Direct load control and time-varying prices have the potential to shift consumption from peak to off-peak periods; and time-varying prices and information may lead to changes in average consumption levels.

Changes in demand can have a number of benefits for networks, retailers, the customer and broader society. Shifting consumption from peak to off-peak periods may defer the need for peak network investment; this shift may also defer investment in peak generating capacity. More cost-reflective pricing may also help suppliers to minimise their hedging costs. The impact on carbon emissions will depend on whether there is an overall reduction in demand; it also depends on the carbon intensities of marginal plant during peak and off-peak periods.