Australian Energy Market Commission

REVIEW

FINAL STATEMENT OF APPROACH

Request for Advice on Cost Recovery for Mandated Smart Metering Infrastructure

Commissioners
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10 March 2010

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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
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
CoAG	Council of Australian Governments
Commission	see AEMC
CPI	Consumer Price Index
DNSP	Distribution Network Service Provider
DSP	Demand Side Participation
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
NSSC	National Stakeholder Steering Committee on smart meters
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) most efficiently accommodates cost recovery for smart metering infrastructure mandated by a Ministerial determination.[1]

This paper presents our approach to providing the MCE's requested advice. Our approach has been finalised following consideration of submissions on our Draft Statement of Approach.

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 smart meter roll-out and pilot Ministerial determinations which may include direct load control, as contemplated under recent amendments to the National Electricity Law (NEL). Under the MCE's terms of reference (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.

The purpose of this Review is to assess whether the Chapter 6 Rules are the most efficient framework for facilitating cost recovery by DNSPs in meeting their mandated obligations under smart meter roll-out and pilot Ministerial determinations, and to identify where the Rules could be improved to more efficiently accommodate Ministerial 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).*

The Review recognises that the characteristics of a mandated smart meter roll-out or pilot will be significantly different from current metering arrangements.

Currently the provision of smart metering services is a contestable service under the Rules. Mandating the roll-out of smart meters through an exclusive arrangement for DNSPs will result in a mass accelerated provision in smart meters across the market, requiring significant up-front capital investment. While an accelerated roll-out is likely to increase the potential benefits of smart meters, there is the potential for considerable uncertainty about the future costs and benefits of smart metering infrastructure at the time when a Ministerial determination is made.

The mandated exclusivity period for DNSPs may also affect their incentives in undertaking a smart meter roll-out or pilot and impact on the timing, risks and ability for DNSPs to recover their costs compared to the current arrangements. Also, under a Ministerial smart meter roll-out or pilot determination there is a shift in the responsibility and accountability of the DNSP from that of an initiator and primary decision maker to that of an agent of the Minister. A mandated smart meter roll-out or pilot will therefore involve a different decision making format for the network service businesses.

The mandated roll-out of smart meters and provision of smart metering services under Ministerial determination would represent a fundamental change to the market and the role of the distribution network. We will consider the implications of these changes in developing our advice and assessing the effectiveness of the current Chapter 6 Rules. Further discussion on our approach to providing the MCE's requested advice is in Chapter 2.

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 has provided for mandated smart meter roll-outs to be exclusively performed by DNSPs, as it considered that the benefits of a roll-out were split between various parties in such a way that individual parties were unlikely to independently establish a positive business case for investing in a roll-out.[3]

The MCE's Statement of Policy Principles on smart meters and the Smart Meters Act[4] 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:

- roll-out smart metering services to customers; and
- conduct trials and pilots of smart metering infrastructure and other related technologies, including direct load control.

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 obligations on DNSPs, triggering a mechanism for the recovery of efficient direct costs in accordance with the Rules.[5]

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

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

[3] MCE, 2008, *Smart Meter Decision Paper*, 13 June, p. 1.

[4] On 29 October 2009, the *National Electricity (South Australia) (Smart Meters) Amendment Act 2009* (Smart Meters Act) passed the South Australian Parliament. It commenced operation on 1 January 2010.

[5] Minister for Energy (SA), Second Reading Speech - Smart Meters Bill, 9 September 2009.

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.[6]

The MCE has agreed to provide any legislative support necessary to ensure appropriate cost recovery for DNSPs for providing mandated infrastructure services.[7] 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.[8] The MCE also committed to review regulatory incentives to maximise cost transparency and the competitive purchase of meters and metering services.[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 Submissions on the Draft Statement of Approach

The Draft Statement of Approach was published on 17 December 2009 and set out our proposed approach to providing the MCE's requested advice. This paper included a draft set of decision making criteria for guiding the preparation of our advice and a discussion on the scenarios and variables which will be used to test the adequacy of the existing Rules against the issues identified in the ToR.

Chapter 3 of the Draft Statement of Approach contained a description of the issues for consideration under the ToR. While this was not formally required under the ToR, we considered that this additional discussion would assist stakeholders to understand our proposed approach and would provide an opportunity for stakeholders to present their views on the issues before we develop our draft advice.

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6 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 smart 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.

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

8 Ibid.

9 Ibid.

Submissions on the Draft Statement of Approach closed on 5 February 2010, with 10 submissions received. Copies of the submissions received are available on the AEMC website. These submissions have been considered in the development of this Final Statement of Approach.

Chapter 2 of this paper presents our revised decision making criteria and scenario assessment, reflecting comments raised in submissions on our proposed approach.

Appendix D contains a summary of comments raised by stakeholders on the issues for consideration under the ToR, as discussed in Chapter 3 of the Draft Statement of Approach. We will incorporate these comments into our analysis as we prepare our draft advice.

We have found stakeholder submissions useful in developing our understanding of the issues that may arise following Ministerial smart meter and pilot determinations, and look forward to engaging further with stakeholders as we progress our advice.

1.4 Timetable for providing advice and next steps

We will undertake extensive consultation during the development of our advice with all relevant stakeholders. Public consultation on our reports 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
Request for advice made by the MCE	19 November 2009
Publication of Draft Statement of Approach	17 December 2009
Close of submissions on the Draft Statement of Approach	5 February 2010
Publication of Final Statement of Approach	10 March 2010
Publication of Draft Report and draft Rules	May 2010
Close of submissions on Draft Report and draft Rules	July 2010
Submit Final Report to MCE	By 31 August 2010

1.5 Interactions with other work streams

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

- the Australian 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;

- 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; and

- The National Stakeholder Steering Committee's (NSSC's) work on the 'National Smart Metering Program' to facilitate the development of a consistent national framework for smart metering in the NEM.

We also note that the Australian Energy Market Operator (AEMO) has recently published its '2009 Annual Metering Report', which includes information on the application of evolving metering technologies and processes and potential Rules amendments to accommodate them.[10]

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

1.6 Structure of the Paper

The remainder of this Paper is structured as follows:

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

Appendix A – contains the ToR.

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

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

Appendix D – outlines stakeholder comments on our interpretation of the issues outlined in the ToR.

[10] AEMO, 2010, *2009 Annual Metering Report*, 18 January.

2 Approach and Decision Making Criteria

This Chapter outlines our approach to providing the MCE's requested advice, and includes:

- our decision making criteria, which will guide the development of the advice; and
- the scenarios and variables we will 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.

Under the Smart Meters Act there is the potential for a Ministerial determination to require DNSPs to undertake not only smart meter roll-outs, but also trials and pilots of smart metering infrastructure and other related technologies, including direct load control.

Direct load control allows third parties to remotely vary or disconnect the energy use of customers during peak load periods.[11] We recognise that pilots and trials of direct load control may be implemented in isolation of smart metering infrastructure, and will consider the implications that such pilots and trials may have on the regulatory framework for cost recovery in developing our advice. We also note that there is the possibility that changes to Chapter 6 of the Rules may be required to accommodate the specific characteristics of pilots and trials of direct load control. For instance,

[11] We note that a number of direct load control trials have been successfully conducted in South Australia over recent years. For further information on ETSA Utilities' trials of direct load control see: http://www.etsa.com.au/public/download.jsp?id=7726

direct load control trials are likely to have fewer operational benefits for DNSPs (e.g. reduced meter reading expenditure) compared to a smart meter roll-out.

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 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.[12] 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 addressed through the outcomes of smart meter trials and pilots. The mandated smart meter trials and pilots should help to confirm the findings of the MCE's 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 potential 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.

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

If the capturing of operational benefits requires a change in behaviour by the DNSP or other market participants, 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 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 indicates 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.[13] 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.

2.2 Decision-making criteria for providing the advice

The decision making criteria for providing our advice will be used to assess the effectiveness of the current Rules against the issues identified in the ToR.

[13] Subject to paragraph 13.3 of the MCE ToR that excludes any further jurisdictional derogations.

In providing our advice and recommending any Rule changes, under the ToR we are required 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.

We have considered these factors in developing our decision making criteria.

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.[14]

The NEO reflects the concept of economic efficiency with explicit emphasis on the long term interests of customers. It also relates to 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:

> 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.[15]

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.[16]

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[14] Section 7 of the NEL.

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

We have also had regard to the Revenue and Principles in the NEL and will consider them further as we develop our advice.[17] 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. [18]

2.2.1 Final decision making criteria

After considering stakeholder submissions on our Draft Statement of Approach, we have finalised our decision making criteria. These criteria are consistent with our duty to have regard to the NEO and the requirements of the ToR. These criteria will be used to guide our approach and the development of our recommendations to the MCE.

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

1. Promotion of the efficient management of costs and provision of services

The regulatory framework should promote the efficient provision of smart metering services and the efficient operation of smart metering infrastructure. The Rules need to provide incentives for DNSPs to minimise costs in deciding upon the design, purchase and implementation of equipment and software to meet their obligations under smart meter roll-out and pilot Ministerial determinations. The regulatory framework must promote efficient investment by DNSPs in mandated smart metering infrastructure and reduce the risks of over and under investment. The regulatory framework should also provide DNSPs with a reasonable opportunity to recover their efficient costs in meeting a Ministerial determination.

2. Appropriate allocation of risk, having regard to what DNSPs can control

There are a number of risks associated with mandated investment in smart metering 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 promote the effective identification and management of such risks, 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

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16 Further discussion on the MCE's Smart Meters Decision Paper, the Smart Meters Act and draft transitional Rule can be found in Chapter 1.

17 Section 7A(2) of the NEL.

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

that the regulator is able to consider these benefits in making its determinations and that 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 regulatory processes

The regulatory process for determining the efficient costs and benefits associated with mandated smart metering infrastructure should be transparent and open, with the opportunity for stakeholder input. The regulatory framework should also ensure that the regulator has sufficient time and information to make its determinations.

5. Robust to the necessary range of possible applications

The Rules for mandated smart metering infrastructure should be robust enough to accommodate all potential smart meter roll-out and pilot Ministerial determinations and the potential for future contestability in smart metering services. 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 types of regulated distribution investments

A common framework for economic regulation should be applied to all distribution investments which are used in the provision of regulated services, to promote consistent and effective regulation and regulatory certainty. Any deviation in treatment, specifically in relation to mandated smart metering infrastructure, would have to be justified as being in the long term interests of consumers.

2.2.2 Changes to our proposed decision making criteria

In our Draft Statement of Approach, we set out proposed decision making criteria for stakeholder comment. Outlined below is a summary of changes that have been made to our proposed decision making criteria, following our consideration of submissions.

We have amended our criteria to more accurately reflect the NEL Revenue and Pricing Principles, to ensure the regulatory framework will:

- provide DNSPs with a reasonable opportunity to recover their efficient costs in fulfilling their obligations under a smart meter roll-out or pilot Ministerial determination;
- promote efficient investment in mandated smart metering infrastructure; and
- promote the efficient provision of smart metering services.

These changes have been made in response to submissions from the NSSC and Energex, which suggest that our proposed criteria should be amended to be

consistent with the NEL Revenue and Pricing Principle of providing DNSPs with a reasonable opportunity to recover at least their efficient costs.[19] EnergyAustralia suggests that DNSPs should be able to recover the costs it has incurred in meeting the requirements of a Ministerial determination.[20] However, we consider that our criteria should reflect the NEL Revenue and Pricing Principle of providing for efficient cost recovery.

Origin submits that the regulatory framework should not impede the development of the contestable provision of smart metering infrastructure following the mandate period.[21] Similarly, the NSSC notes that Rules for mandated smart metering infrastructure should also accommodate arrangements that may be required to transition off a roll-out determination.[22] We have amended our criteria to ensure that the regulatory framework will be robust enough to accommodate all potential Ministerial determinations and the potential for future contestability in smart metering services. The scenarios we will use to test our recommendations also include a scenario which relates to the future contestability of smart metering services (see section 2.3.1.4 below).

Both EnergyAustralia and the NSSC submit that the ToR does not request the Commission to consider whether benefits will be realised or not, but rather whether the regulator is able to consider potential benefits. They advise that the criteria should be amended to ensure that the regulatory framework will support the consideration of benefits, rather than support the realisation of benefits.[23] While we have amended this criteria to more closely reflect the language in the ToR, we continue to consider that the regulatory framework must seek to ensure that the benefits associated with mandated smart metering infrastructure are realised in a timely manner for the long term interest of customers.

Regarding the consideration of benefits, Energex notes that an assessment of the benefits of smart metering will be problematic, given the uncertainty of benefits to be realised. [24] It also suggests that demand side benefits need to be considered in the context of each jurisdiction's retail price regulatory framework and the ability to pass on appropriate price signals to customers.[25] As the uncertainty of the anticipated benefits will be considered under our scenario assessment, we have not amended our criteria to reflect this issue.

We have also clarified some of our criteria, where stakeholders considered that their intent was unclear. Our criteria has been amended to clarify that stakeholders will have input to the regulatory processes for determining the efficient costs and benefits

[19] See submissions on the Draft Statement of Approach from: Energex, p. 3; NSSC, pp. 10.

[20] EnergyAustralia, Submission on the Draft Statement of Approach, p. 6.

[21] Origin Energy, Submission on the Draft Statement of Approach, p. 8.

[22] NSSC, Submission on the Draft Statement of Approach, p. 11.

[23] See submissions on the Draft Statement of Approach from: EnergyAustralia, p. 4; NSSC, p. 10.

[24] Energex, Submission on the Draft Statement of Approach, p. 3.

[25] Energex, Submission on the Draft Statement of Approach, p. 3.

of smart metering infrastructure, and not the capital governance and decision making processes of DNSPs, following concerns raised by the NSSC and Energex.[26] We have also re-worded our criteria, in response to comments by EnergyAustralia and the NSSC, to clarify that the regulatory framework should provide for consistency across different types of regulated distribution investments, rather than consistency in the regulatory treatment of different types of costs.[27]

2.3 Scenarios and variables for developing our advice

We will 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 smart meter roll-out or pilot 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.

2.3.1 Scenarios and variables for developing our advice

After considering stakeholder submissions, we have finalised the scenarios and variables we will consider in developing our advice.

We will 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.

[26] See submissions on the Draft Statement of Approach from: Energex, p. 3; NSSC, pp. 10-11.

[27] See submissions on the Draft Statement of Approach from: EnergyAustralia, p. 4; NSSC, p. 11.

2.3.1.1 The timing of the Ministerial determination

Regarding this variable, we will 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 the distribution determination process is not practicable, creating a requirement for cost recovery to be pursued via other available mechanisms, such as the cost pass-through provisions.

2.3.1.2 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.

We note the NSSC supports the consideration of the duration of a roll-out determination.[28]

2.3.1.3 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 investments 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. We note that Jemena supports the consideration of scenarios involving differing levels of certainty about costs and benefits, with Jemena noting that in some cases DNSPs will have firm contract prices for the mandated investment and in other cases DNSPs will only have an estimate derived from pilots and trials.[29]

The range of possibilities that we will consider include:

[28] NSSC, Submissions on the Draft Statement of Approach, p. 12.

[29] Jemena, Submission on the Draft Statement of Approach, p. 2.

- 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 of potential costs and benefits 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 for the regulator. This will be compounded where the realisation of operational benefits requires a change in practice by the DNSP or other market participants, 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.

EnergyAustralia suggests the Commission also consider a scenario where the DNSP considers there would be benefits in providing services and functionalities that are beyond those mandated by a Ministerial determination, as it considers the regulatory framework needs to accommodate this possibility.[30] Origin notes the potential for the DNSPs to develop commercial services using the mandated smart metering infrastructure, and considers that the revenue such services generate would be relevant to the approach adopted to determine the regulated cost recovery for the mandated infrastructure.[31]

We note that it may be difficult in some circumstances to specify a clear boundary between regulated smart metering services and other associated commercial services that DNSPs may develop using mandated smart metering infrastructure. As noted by a number of stakeholders, we also acknowledge the role of smart meters in facilitating the introduction of smart grids.[32] The potential uses of smart metering infrastructure will be an important consideration in ensuring that the regulatory framework promotes efficient investment in mandated smart metering infrastructure and the efficient provision of smart metering services. We will have regard to this as we test our analysis against the scenarios regarding the anticipated costs and benefits, and also in regards to the future contestability of smart metering services (see below).

[30] EnergyAstralia, Submission on the Draft Statement of Approach, p. 6.

[31] Origin, Submission on the Draft Statement of Approach, p. 5.

[32] See submissions on the Draft Statement of Approach from: Energex, p. 7; Energy Networks Association, p. 2; Jemena, p. 1; NSSC, p. 2;

2.3.1.4 The future contestability of smart metering services

The final variable we will include in our scenario analysis concerns the status of smart metering services once the mandated exclusivity period for DNSPs has ended.

The MCE has stated that it remains open to the further expansion of contestable "metering services" beyond the mandated exclusivity 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.[33] We will assess scenarios which allow for:

- The contestability of residential and other small customer smart metering services following the end of the mandated exclusivity period specified in a Ministerial determination; and

- The continuation of DNSPs as the exclusive providers of smart metering services.

We note that submissions from AGL, EnergyAustralia and Energex support the consideration of future contestability, with Energex and EnergyAustralia noting that contestability will impact on the timeframe for DNSPs to recover the costs of the mandated infrastructure.[34]

The NSSC suggests the Commission needs to better define how it will consider contestability.[35] In considering the future contestability of smart metering services, we will assess the types of services that may be provided using smart metering infrastructure. As highlighted by the NSSC, we note that this has the potential to encompass a range of services, including but not limited to, remote connect/disconnect services; remote load control services; smart metering data services; and supply capacity limiting services.[36] We will also consider the potential for the provision and installation of smart meters to become a contestable service.

Origin submits that the recovery of mandated smart metering costs should not include costs that are associated with commercially provided services.[37] We acknowledge the potential for the provision of commercial services using mandated smart metering infrastructure, and will consider this issue in assessing the future contestability of smart metering services.

Some stakeholders consider that the technology choices made by DNSPs in meeting their mandated obligations may limit the potential for future contestability in smart metering services.[38] We also note that data access will be an important factor in

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[33] MCE, 2008, *Smart Meter Decision Paper*, 13 June, p. 7.

[34] See submissions on the Draft Statement of Approach from: AGL, p. 1; EnergyAustralia, p. 3; Energex, p. 3.

[35] NSSC, Submission on the Draft Statement of Approach, pp. 12- 15.

[36] NSSC, Submission on the Draft Statement of Approach, pp. 12- 15.

[37] Origin Energy, Submission on the Draft Statement of Approach, p. 8.

[38] See submissions on the Draft Statement of Approach by: Origin Energy, p. 12; AGL, p. 1.

promoting effective competition in the associated commercial services facilitated by smart metering infrastructure.

We recognise the importance of ensuring that the regulatory framework is not only able to accommodate future contestability, but that it also does not create any barriers to effective competition in smart metering services in the future. In developing our advice we will consider how the regulatory arrangements would influence the choice of technology and the development of commercial products associated with smart metering infrastructure.

A MCE's Terms of Reference

MCE
Ministerial Council on Energy

CHAIR
The Hon Martin Ferguson AM MP
Minister for Resources and Energy
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RECEIVED
20 NOV 2009

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Dr John Tamblyn
Chairman
Australian Energy market Commission
PO Box A2449
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19 NOV 2009

Dear Dr Tamblyn, John

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

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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.

A

No 54 of 2009 assented to 5.11.2009

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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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*.

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B Current Framework for the 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.[39] 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.[40] 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:

[39] See clause 6.2.6(b) of the Rules.

[40] 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.[41] 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.[42]

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. [43]

The AER's classification of services forms part of its distribution determination and applies for the term of the relevant regulatory control period.[44]

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[41] Clause 6.2.1(b) of the Rules.

[42] Clause 6.2.1(c) of the Rules.

[43] 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.[45]

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.[46]

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.[47] The AER's current roll forward model for DNSPs was published in June 2008.[48]

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.[49] 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

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[44] Clause 6.2.3 of the Rules.

[45] Clause 6.2.6(a) of the Rules.

[46] Clause 6.4.3(a) of the Rules.

[47] Clause 6.5.1(a) of the Rules.

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

[49] Ibid, p.3.

rolled forward from year to year using forecast data.[50] 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. [51]

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.[52] 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.[53]

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[50] Ibid.

[51] Clause 6.5.5(2)(ii) of the Rules.

[52] Clauses 6.5.6(c) and 6.5.7(c) of the Rules.

[53] 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.[54] 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.[55]

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. [56] 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

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[54] 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.

[55] Clause 6.2.8(a)(4) of the Rules.

[56] Clause 6.12.1(14) of the Rules.

discussed above.[57] 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.[58] 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.[59] 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.[60] 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 then passing all of the gains through to customers at the time of the next regulatory review in the following regulatory control period.[61] 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

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[57] Clauses 6.6.1(c) and (f) of the Rules

[58] Clause 6.6.1(k) of the Rules

[59] Clause 6.61(e) of the Rules

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

[61] 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. [62] 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.[63]

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.[64]

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.[65]

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. [66]

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:

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[62] Clause 6.18.3(c) of the Rules.

[63] Clause 6.18.4 of the Rules

[64] Clause 6.18.5(a) of the Rules.

[65] Clause 6.18.5(b) of the Rules.

[66] 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%.[67]

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.[68]

[67] 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.

[68] 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 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.

D Submissions on the Issues in the Request for Advice

This Appendix contains a summary of stakeholder submissions on the questions outlined in Chapter 3 of the Draft Statement of Approach. A summary of additional issues which were raised by stakeholders is also included in this Appendix.

Chapter 3 of our Draft Statement of Approach outlined our interpretation of the issues which required consideration in developing our advice to the MCE and set out a number of questions on the issues in the ToR for stakeholder comment. Under the ToR, we were not formally required to provide this additional discussion at this stage of our advice. However, we considered that it may assist stakeholders to understand how we intend to approach the provision of our advice and provide an opportunity for stakeholder comment on the issues in the ToR, prior to the release of our Draft Report.

We have found stakeholder submissions useful in understanding the issues that may arise under a mandated Ministerial determination and will consider the submissions further as we develop our draft advice. In particular, submissions have been useful in further our understanding of the potential risks that may arise for DNSPs and retailers under Ministerial smart metering and pilot determinations and the potential implications of the future contestability in smart metering services.

A total of 10 submissions were received from the following organisations:

- AER;
- AGL;
- Energex;
- EnergyAustralia;
- The Energy Networks Association;
- Integral Energy;
- Jemena;
- NSSC;
- Origin Energy; and
- TRUenergy.

Copies of all of the submissions received are available on the AEMC website at www.aemc.gov.au.

D.1 Summary of submissions on the issues raised in the Request for Advice

Draft Statement of Approach Question	Issues raised by stakeholders
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?	Origin considers that the cost of mandated smart meters need to be separated from general use of system charges, but remain a prescribed charge. Origin suggests this would allow customers to stop paying a DNSP's regulated smart metering charge if a customer's meter installation was changed to a third party. It notes that DNSPs may only need to alter or upgrade their communications technology rather than re-sell existing assets and that this may lessen the stranding of fixed assets. However, it notes that an existing mesh radio communications system may suffer some asset stranding. Origin suggests that the risk of asset stranding may be minimised by an exit/restoration fee to recover the residual value of stranded assets and by DNSPs taking into account future contestability at the commencement of the roll-out and in the choice of technology.[69] Integral Energy considers that if contestability is introduced and other parties wish to replace the meter, the other party should compensate the DNSP for the fair value of the asset at the time of the disposal. Integral considers this approach will ensure that the costs of the first generation assets are quarantined so that competition in later periods is as effective as possible.[70] Energex does not consider there would be a market for current metering infrastructure as type 6 meters would become technologically obsolete following a roll-out. Energex suggests stranded asset costs could be recovered by allowing the metering assets to remain in the RAB so the DNSP continues to earn a return on these assets until their value is fully depreciated; or the stranded assets could be removed from the RAB and DNSPs could

[69] Origin Energy, Submission on the Draft Statement of Approach, pp. 6, 8 - 9.

[70] Integral Energy, Submission on the Draft Statement of Approach, p. 2.

	recoup the written down value as part of the cost recovery process. Energex notes that future contestability will be a significant issue in the ability and timeframe for DNSPs to recover stranded costs and DNSPs need assurance of cost recovery in this event.[71] The NSSC notes that in rolling forward their RAB, DNSPs may choose to measure the disposal value of assets according to proceeds from a disposal or the regulatory book value of the assets. The NSSC considers that if disposals are measured according to their regulatory book value, a material stranded asset risk may remain.[72]
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? 4. Are there any other issues	The AER considers its 60 day review period for considering pass through applications is inadequate, particularly as the AER may be required to assess multiple pass through applications for smart metering infrastructure in the same jurisdiction simultaneously. The AER notes that when considering initial budget applications for Victorian advanced metering infrastructure, it had and required an eight month period to test and consult on these proposals and this process did not require an efficiency assessment. Therefore, the AER submits that additional time is likely to be required to conduct an efficiency assessment under an incentive regulation framework.[73] Integral Energy notes there should be appropriate time periods for lodging pass through applications. Integral also notes that the more appropriate way to promote efficient outcomes is to ensure that the initial revenue allowances are as robust as practicable and to incorporate pass through mechanisms to manage any unexpected changes.[74] EnergyAustralia suggests the Commission consider the appropriate materiality threshold for the pass through

[71] Energex, Submission on the Draft Statement of Approach, p. 4.

[72] NSSC, Submission on the Draft Statement of Approach, p. 16.

[73] AER, Submission on the Draft Statement of Approach, p. 1.

[74] Integral Energy, Submission on the Draft Statement of Approach, pp. 2, 3.

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?	of mandated smart metering costs and whether there are any other mechanisms for passing through these costs.[75] The NSSC suggests the Commission consider whether reliance on statements made by MCE SCO and the AER regarding the pass through of mandated smart metering costs will provide sufficient certainty to DNSPs to make investment decisions. The NSSC also highlights uncertainty in the wording of the current pass through provisions in regards to the definition of "materiality". The NSSC questions whether a materiality hurdle is appropriate for a Ministerial roll-out or pilot determination and if the materiality threshold should apply to costs over a financial year or in respect of the whole event. It also questions whether the current timeframes for making pass through applications will provide enough time for DNSPs to prepare the required information and for consumer groups to respond to this information. The NSSC notes that cost pass through was intended for rare unanticipated events, lacks many of the sophisticated properties of incentive based regulation, and should not be seen as an easy, uncomplicated or obvious choice.[76] Origin considers that for mandated pilots and trials, a materiality threshold should not apply. Origin considers that DNSPs should expect full cost recovery as the objectives of such activity is focused on addressing uncertainties, rather than testing commercial services that are incremental to the central technology being rolled out. [77] Energex is concerned about the AER's materiality threshold for general nominated events. Energex considers it is a very arbitrary approach in terms of quantum and timing and does not allow DNSPs to recover efficient costs for unforseen events. An alternative criteria needs to be developed to recognise the efficient expenditure

75 EnergyAustralia, Submission on the Draft Statement of Approach, p. 10.

76 NSSC, Submission on the Draft Statement of Approach, pp. 12, 17.

77 Origin Energy, Submission on the Draft Statement of Approach, p. 9.

78 Energex, Submission on the Draft Statement of Approach, p. 4.

	required by DNSPs within a determination period.[78]
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?	Integral Energy considers that the appropriate starting point is to treat smart metering services as standard control services. Integral notes that Chapter 6 of the Rules is able to accommodate a lighter handed form of regulation, where a clear case is established. [79] EnergyAustralia suggests the Commission consider what cost recovery approaches should apply to metering services that are classified as alternative control services.[80] The NSSC notes that smart metering infrastructure will provide metrology and non-metrology services and questions whether some smart metering services should and can be classified differently (e.g. standard control, alternative control, unregulated). The NSSC also questions whether: • service classification can be made/amended within a regulatory control period; • the control mechanism for alternative control services should be set out in the Rules rather than left to AER discretion; • the cost pass through arrangements should apply to alternative control services; and • the cost pass through process should allow for the classification of services within that process.[81] Origin considers it important for the regulator to apply a consistent approach to service classification in each

[79] Integral Energy, Submission on the Draft Statement of Approach, p. 2.

[80] EnergyAustralia, Submission on the Draft Statement of Approach, p. 10.

[81] NSSC, Submission on the Draft Statement of Approach, p. 18.

	jurisdiction and network area.[82] Energex submits that the administrative costs of providing variable metering services as an alternative control service would far outweigh any consumer benefits. Energex suggests that changes in classification would require a full review via the release of a regulatory impact statement and that a full assessment under clause 6.2.2 of the Rules needs to considered. Energex acknowledges that if costs can be separately identified and other administrative issues addressed, unbundling could occur without having a change in classification through having a separate fixed charge for metering services. Energex notes that any change in classification would have to occur at the start of the next regulatory control period. [83]
6. What issues may arise in regards to the recovery of retailer costs via distribution charges for mandated smart metering pilots/trials?	Energex suggests that DNSPs must be provided with certainty that retailers' costs will be approved to ensure risks associated with retailer costs are not borne by DNSPs. [84] The NSSC notes that Ministerial determinations may not include an obligation on DNSPs to procure retailer services and the Commission should assume any DNSP-retailer contract will need to be entered into voluntarily. The NSSC notes that the Rules (e.g. pass through provisions) may not provide certainty to DNSPs that these contract costs can be recovered.[85] AGL considers that retailers should be able to pass on the costs of pilots and trials to a mandated party as there is no other mechanism for the recovery of such costs in an equitable manner. AGL also considers that retailers should be able to recover their costs of implementing the smart meter roll-out. AGL notes that retailers would

[82] Origin Energy, Submission on the Draft Statement of Approach, p. 9.

[83] Energex, Submission on the Draft Statement of Approach, p. 5.

[84] Energex, Submission on the Draft Statement of Approach, p. 6.

[85] NSSC, Submission on the Draft Statement of Approach, p. 19.

6. What issues may arise in regards to the recovery of retailer costs via distribution charges for mandated smart metering pilots/trials?	be reluctant to introduce new products and services for smart meters if unable to recover their implementation costs, which may compromise the realisation of benefits.[86] Origin considers that where retailer involvement is required, DNSPs should be granted the recovery of costs incurred by the retailer. Origin notes that retailers cannot be expected to continue to support pilots and trials if there is no prospect of cost recovery either through the regulated tariff, or via the adjustment of the DNSP's charges. It supports the Commission's consideration of related party contracts, and considers that the financial relationship between retailers and DNSPs under pilots and trials should be subject to the same separation and ring-fencing disciplines that would be expected under their normal functions. Origin notes that the procurement of retail services for pilots and trials should be upon a commercial basis and that it would be concerned if a retailer with a related distribution business agreed to undertake a pilot/trial process if the process of selection was not transparent.[87]
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?	Jemena notes that Chapter 6 of the Rules relies on businesses and regulators having a good level of certainty on forecast costs. However while pilots and trials will increase certainty regarding smart metering costs, they may not on their own allow the estimation of costs precisely enough to make a regulatory determination or secure business approvals and financing.[88] EnergyAustralia questions to what extent the delay in smart metering benefits is any different to the timing of benefits for other distribution services. EnergyAustralia notes that distribution network services generally have huge up front capital costs and benefits that are enjoyed over a long time.[89]

[86] AGL, Submission on the Draft Statement of Approach, p. 2.

[87] Origin Energy, Submission on the Draft Statement of Approach, p. 10.

[88] Jemena, Submission on the Draft Statement of Approach, p. 2.

[89] EnergyAustralia, Submission to the Draft Statement of Approach, p. 10.

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?	TRUenergy notes that remote reading capabilities will provide immediate benefits to DNSPs which must be immediately passed on, in the form of removal of charges for disconnection, reconnection, and special meter reads when conducted remotely.[90] Orign expects the cost per customer to be higher at the beginning of the roll out and decline as offsetting benefits flow through. Origin notes that benefits in the short to medium term relate to operational expenditure and over the long term, avoided capital costs may also arise. Origin considers that depending on the length of an exclusive mandate, a DNSP may have incentives to ensure that the benefits are factored into its cost recovery process if the threat of competition post-mandate is present. [91] Energex suggests that regulators need to recognise there may be a considerable time delay in realising benefits. Energex notes that benefits related to reductions in demand are dependant not only the actions of a DNSP, but also consumers, retailers and the responses to market developments.[92] The NSSC notes that costs incurred will include expenditure on telecommunications and IT systems, project management and other preparation for the implementation of smart meter infrastructure, and financing costs. The NSSC also notes that smart metering may impact on costs relating more broadly to the distribution network, which may already be incorporated in the current distribution determination.[93]

[90] TRUenergy, Submission on the Draft Statement of Approach, p. 2.

[91] Origin Energy, Submission on the Draft Statement of Approach, p. 10.

[92] Energex, Submission on the Draft Statement of Approach, p. 6.

[93] NSSC, Submission on the Draft Statement of Approach, p. 8.

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?	TRUenergy notes that it is concerned that the uncertainty regarding the anticipated costs and benefits of a smart meter roll-out is overstated. TRUenergy considers that the regulatory environment for smart meters under a Ministerial determination will be finalised shortly, which allow for the requirements, obligations and responsibilities of DNSPs to be clearly specified. TRUenergy considers the extent to which a smart meter roll-out would be considered exceptional relative to other infrastructure roll-outs would need to be proven prior to the consideration of alternative regulatory approaches.[94] Integral Energy considers the details provided in the Ministerial determination, along with the National Minimum Functional Specification and experience gained through pilots and trials will help manage any risk that the regulatory mechanism selected will be inappropriate.[95] Origin considers that the Rules will remain effective if sufficient experience can be gained through pilots and trials. Origin also notes that uncertainty can be reduced by transferring risk to third parties such as telecommunication providers and that alternative cost-recovery processes in Victoria have not proven effective nor have provided certainty around the pass through of operational benefits.[96] Energex suggests that the regulator must be cognisant of the uncertainty regarding smart meters and must not reduce allowed expenditure on the basis of assumed future benefits. Energex suggests that the increased uncertainty and risk of cost recovery relates to: the reliability of the infrastructure (e.g. technical failure); asset life and performance; flow on impacts of smart metering infrastructure to future network developments;

[94] TRUenergy, Submission on the Draft Statement of Approach, p. 2.

[95] Integral Energy, Submission on the Draft Statement of Approach, p. 2.

[96] Origin Energy, Submission on the Draft Statement of Approach, p. 11.

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?	stranded costs of existing assets following a mandated roll-out; and the risk of future contestability which may prevent DNSPs from recovering their costs.[97] The NSSC notes that by the time of a roll-out determination, uncertainty may be reduced (e.g. through pilots, trials, maturing technology etc), but that the Commission can not fully know the circumstances that will exist at the time of a roll-out determination. The NSSC suggests a mechanism or some flexibility in the regulatory framework may be required at the time of a Ministerial determination to accommodate this potential uncertainty. The NSSC notes that some benefits may arise in relation to other distribution projects (already incorporated in current distribution determinations) and some benefits may flow directly to consumers with no benefit to the DNSP (e.g. systems augmentation). It also highlights that the benefits of smart metering may be captured through S-factor targets [service and performance targets] in the next regulatory period and the costs of bringing forward these benefits needs to be considered.[98]

[97] Energex, Submission on the Draft Statement of Approach, pp. 1, 6.

[98] NSSC, Submission on Draft Statement of Approach, pp. 5, 9.

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?	The AER suggests the Commission should define what a "reasonable timeframe" for realising operational network benefits would be. The AER considers that its role should be limited to assessing and monitoring only those benefits relating to DNSP costs and revenues, which would be reflected in DNSPs' regulatory proposals. Further potential benefits (e.g. impact on carbon emissions) are outside the scope of the AER's role and may be more appropriately assessed through industry planning processes.[99] EnergyAustralia considers that the AER already has a clear role in monitoring and reporting on network revenue or pricing determinations and various aspects of a DNSP's performance under the NEL. It suggests the Commission consider whether there is anything fundamentally different about the AER's task in the context of a smart metering roll-out before considering whether any additional functions are required. EnergyAustralia also questions whether it is appropriate for the Commission to raise the issue of a monitoring role to assess whether benefits are being realised, as it considers the MCE is interested in whether the Rules allow benefits to be accounted for and passed on.[100] Origin suggests the following type of information could be required from DNSPs: number of customers in an area with smart metering infrastructure; cost of delivering smart metering services relative to other 'excluded' services; forecasts of when other areas will receive services; and whether 'excluded' service charges will be reduced to all customers whether or not smart meters are available in their area, or if the charges will be applied at the margin.[101]

[99] AER, Submission on Draft Statement of Approach, p. 2.

[100] EnergyAustralia, Submission to the Draft Statement of Approach, pp. 4, 10- 11.

[101] Origin Energy, Submission on the Draft Statement of Approach, p. 12.

	Energex questions why the AER would be responsible for monitoring benefits outside of the normal assessment of efficiency. It notes that the assessments of benefits should not be tied to costs incurred in fulfilling a Ministerial determination.[102]
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?	The AER suggests the Commission consider the interactions of different schemes on incentives for DNSPs to reduce operational expenditure. The AER also suggests the practical issue of how cost efficiencies from smart meter roll-outs would be separated from other operational expenditure savings should be considered.[103] Integral Energy notes that incentive mechanisms like the EBSS allow DNSPs to be rewarded for reducing their controllable costs. It notes that such mechanisms are appropriate where costs are based on proven technology and reasonably stable business conditions, but they are not appropriate for government mandates generally or where there is material uncertainty regarding smart meter technology and the broader market arrangements for smart meters.[104] The NSSC suggests the Commission consider whether it is appropriate to apply financial incentives to encourage DNSPs to deliver smart metering roll-outs efficiently given the potential characteristics of such a program. However it notes that any special arrangements introduced for smart metering cost recovery should be limited to smart metering infrastructure only and not extended to the use of smart technology used to provide network services.[105]

[102] Energex, Submission on the Draft Statement of Approach, p. 6.

[103] AER, Submission on Draft Statement of Approach, pp. 1 - 2.

[104] Integral Energy, Submission on the Draft Statement of Approach, p. 3.

[105] NSSC, Submission on the Draft Statement of Approach, p. 20..

	Origin considers that an EBSS may be inappropriate due to the pattern of cost recovery for the DNSP as consumers will pay more for metering services early in the roll-out. It also notes that delaying the pass through of benefits may not meet the Minister's policy objective.[106]
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?	Origin notes that Chapter 6 may require further work to accommodate mandated smart metering and that it is unclear what form an alternative incentive mechanism, outside of Chapter 6, might take.[107] Energex suggests that the uncertainty relating to smart metering infrastructure does not allow the appropriateness of the current incentive schemes to be determined at present. It also notes that future contestability will have a dramatic impact on the effectiveness of the incentive schemes. [108]
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?	AGL notes that the regulation of service performance outcomes should also be considered as under a monopoly arrangement retailers have little influence over the quality of service delivery and would rely on regulatory compliance for corrective actions and incentives for improvement. AGL also raises concern over the allocation of the risks associated with a smart meter roll out and the potential knock-on effect on retailer costs and customer services due to performance failure. AGL considers that the regulatory framework should place significant emphasis on accountability for service outcomes and ensure responsibility and risks for managing them is allocated to the mandated party who is best placed to manage them.[109] Origin considers that a key technology risk is choice of communications technology, particularly the degree to

[106] Origin Energy, Submission on the Draft Statement of Approach, p. 11.

[107] Origin Energy, Submission on the Draft Statement of Approach, p. 12.

[108] Energex, Submission on the Draft Statement of Approach, p. 7.

[109] AGL, Submission on the Draft Statement of Approach, pp. 1-2.

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?	which its performance might be superseded and the ability for it to be bypassed. It notes that choice of technology should be informed by the potential for future competition. It suggests the AER consider, when assessing pass through applications, whether technology risks and costs could be minimised by using alternative telecommunication service providers rather than developing proprietary solutions. It notes that incentives to manage technology risks may be ineffective unless clear commitments for future contestability in smart metering services is made. It considers that pilots and trials will address uncertainty around the selected technology, but suggests that technology risks need to be borne by the party choosing the communications technology rather than retailers and customers, particularly when the prospect of future contestability is known in advance.[110] ENA highlights the following technology risks: shorter lifecycles for more assets, driven by technological obsolescence; greater competition and long-term risk of asset stranding from new technology. ENA also raised the short-term need for targeted incentives to bridge the 'risk gap' of smart grid technologies.[111] Energex considers that DNSPs face the following technology risks: integration with smart grids; uncertain asset life of smart meters and communications devices; the productivity of smart metering infrastructure communications if other parties install meters that are not properly integrated; rapidly changing technology; and unforseen cyber risks. It suggests that it is difficult to determine how the current regulatory framework will accommodate this uncertainty. [112] NSSC notes that the incremental investment required to meet a smart meter mandate may differ across DNSPs

[110] Origin Energy, Submission on the Draft Statement of Approach, pp. 5-6, 12.

[111] ENA, Submission on the Draft Statement of Approach, p. 2.

[112] Energex, Submission on the Draft Statement of Approach, p. 7.

[113] NSSC, Submission on the Draft Statement of Approach, p. 2.

	as businesses are at different stages of implementing smart grid technologies.[113]
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?	Jemena notes that Chapter 6 of the Rules provides a firm basis for cost recovery and it is appropriate that the review is focused on Chapter 6 rather than creating a new or different regime. Jemena notes this is particularly important as smart metering infrastructure will be an integral part of investment to enable intelligent networks.[114] AGL considers that alternative regulatory approaches should be considered as the existing approach accommodates more predictable and stable investments and may not be fit-for-purpose for investment in technology and operation that is relatively new. AGL notes that an alternative approach with similar economic principles may be required to ensure issues related to future contestability, accountability for performance outcomes and risk allocations can be addressed.[115] Integral Energy considers there is no prima facie reason why Chapter 6 can't accommodate a Ministerial smart metering determination. It notes that the administrative and cost burden of moving to an alternative form of regulation should be considered and that a different regulatory mechanism may impact on regulatory incentives.[116] The NSSC encourages the Commission to consider what would be required to apply the transmission 'contingent project scheme' to smart metering. It also notes that the examination of Chapter 6 should be limited to smart metering and not extend to a general review of the effectiveness of Chapter 6 in relation to network investments. The NSSC considers that whether Chapter 6 of the Rules is the most appropriate regulatory framework for efficient cost recovery will depend on the level of certainty surrounding DNSP smart metering

[114] Jemena, Submission on the Draft Statement of Approach, p. 1.

[115] AGL, Submission on the Draft Statement of Approach, p. 2, 6.

[116] Integral Energy, Submission on the Draft Statement of Approach, p. 1.

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?	costs and benefits at the time of a Ministerial determination. The NSSC notes Chapter 6 responds well to situations with low uncertainty. The NSSC considers that any specific additional regulation should be minimised and well justified.[117] Origin suggests that alternative regulatory models may create further uncertainties. It considers that alternative approaches such as that applied in Victoria do not provide sufficient oversight powers to the regulator, in an environment where investment is also shielded from competitive pressures. Origin encourages a thorough assessment of Chapter 6 before alternatives are considered. It considers Chapter 6 will: provide confidence that appropriate incentives are in place to ensure efficient cost recovery, incentivise DNSPs to forecast and budget smart metering infrastructure deployment costs under a known framework; provide benchmark information on costs to assist future decision making. It suggests that not applying Chapter 6 would be an indication of: significant uncertainty and risk and that the underlying cost-benefit analysis should be revisited; the smart metering infrastructure is not monopolistic and commercial provision should be considered; and alternative technology platforms should be considered.[118] ENA considers that Chapter 6 should remain the basis for regulatory decision making. However, it suggests that the suitability of the Victorian approach should be considered, particularly around the accelerated depreciation of old assets and the transitional provisions regarding the treatment of metering assets following the mandate period.[119] Energex suggests that a true up mechanism following the mandate roll-out could be considered to ensure

[117] NSSC, Submission on Draft Statement of Approach, pp. 2, 4, 20.

[118] Origin Energy, Submission on the Draft Statement of Approach, pp. 2, 4, 6-7, 13.

[119] ENA, Submission on the Draft Statement of Approach, p. 2.

[120] Energex, Submission on the Draft Statement of Approach, pp. 1, 2, 7.

[121] NSSC, Submission on Draft Statement of Approach, pp. 3.

	DNSPs are able to recover their actual costs to fulfil the mandate. It considers that in determining the appropriateness of Chapter 6, the Commission should consider: the increased uncertainty of smart metering investment compared to traditional investment regulated under Chapter 6; uncertainty in regards to whether smart metering infrastructure will operate in a commercial environment or a regulated environment; the integral nature of smart metering infrastructure to distribution network infrastructure; and the integral nature of future smart metering costs to a network's capital and operating requirements. If these uncertainties can not be accommodated under Chapter 6, Energex considers an alternative approach should be implemented to ensure full cost recovery.[120] The NSSC notes that some benefits may be immediately identifiable and quantifiable and others may not be. The NSSC notes that the realisation of some benefits may depend on responses by other parties beyond the DNSP and broader changes to national regulatory instruments, and some benefits may be performance related rather than reductions in cost.[121]
14. Are there any particular mechanisms for smoothing tariff impacts over time that we should consider in developing our advice?	Integral Energy suggests against adjusting depreciation schedules as a means manage the timing difference between costs and longer term benefits. It suggests this will create an additional regulatory risk in regards to business cash flows that may impact on the overall rate of return and customer service level outcomes. Intergal notes that technology risk and uncertainty over the timing of benefits may also make it difficult for the AER to justify the use of alternative depreciation profiles.[122] EnergyAustralia considers that it should be clarified that the MCE is seeking advice on how the tariff impacts of smart metering infrastructure can be smoothed rather than the smoothing of total network tariffs. It suggests the Commission should consider: what constitutes the efficient allocation of costs of a smart meter roll-out; how may the costs of smart metering be appropriately apportioned; the mechanisms for smoothing out the

[122] Integral Energy, Submission on the Draft Statement of Approach, p. 3.

	costs of smart metering infrastructure; and whether adjustments to the depreciation profiles could be used to smooth the tariff impacts of smart metering costs.[123] The NSSC suggests the Commission consider whether deferring cost recovery to smooth the price impacts on customers remains compatible with cost recovery if contestability for smart metering services occurs after the mandate period. It also suggests that deferring cost recovery may create difficulties where assets are replaced and the remaining capital value of the existing assets and the value of the new assets need to be recovered.[124] Energex suggests that current regulatory arrangements provide for smoothing of costs over the determination period.[125]
15. What potential issues may arise from the unbundling of metering charges from DUOS charges?	TRUenergy notes that competition in the provision of metering services requires the unbundling of metering services from DUOS charges.[126] AGL prefers smart meter services to be classified as alternative control services as they are distinct from network services and are subject to future contestability. AGL submits that charges for smart meters should be ring fenced from DUOS and network charges and the charges for meter and service provision should be separated as these are currently two contestable markets. It considers this would facilitate contestability by providing a transparent disclosure of cost and charges for smart meters and services.[127]

123 EnergyAustralia, Submission to the Draft Statement of Approach, p. 11.

124 NSSC, Submission on the Draft Statement of Approach, p. 21

125 Energex, Submission on the Draft Statement of Approach, p. 8.

126 TRUenergy, Submission on the Draft Statement of Approach, p. 2.

127 AGL, Submission on the Draft Statement of Approach, p. 2.

	The NSSC notes that classifying smart metering services as alternative control services would require a separate price to be charged.[128] Origin strongly supports the unbundling of metering charges from DUOS as it provides clarity for consumers and a benchmark for third parties.[129] Energex notes that the unbundling of metering charges from DUOS would require significant changes to its systems including: identification and separation of variable and fixed charges; tariffs and associated pricing processes; management and operation of a separate regulatory control framework; and alterations to billing and B2B to accommodate separate metering charges. It questions whether customers would see any benefits from unbundling metering services.[130]
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?	AGL notes that unless retailer tariffs are unregulated, it is difficult for cost reflective network charges to be passed on to end users.[131] EnergyAustralia considers there is no reference in the MCE's ToR on incentives for changing the tariff methodologies or facilitating the benefits of demand side management. It considers that the Commission's question is pre-emptive given the early stage of the introduction of smart metering.[132] The NSSC considers that the existing pricing principles in Chapter 6 of the Rules are generic economic principles that are equally relevant in a world with and without smart meters. The NSSC also considers that

[128] NSSC, Submission on the Draft Statement of Approach, p. 21

[129] Origin Energy, Submission on the Draft Statement of Approach, p. 13.

[130] Energex, Submission on the Draft Statement of Approach, p. 8.

[131] AGL, Submission on the Draft Statement of Approach, p. 2.

[132] EnergyAustralia, Submission to the Draft Statement of Approach, pp. 11-12.

	tariffs that are relevant to demand side management as opposed to tariffs that are charged for smart metering services, are outside the scope of the Commission's review.[133] Origin notes that while the retailer decides the extent to which the network tariff structure is preserved and passed through to end-use customers, effectively competitive markets will provide the optimal outcome in terms of tariffs. It considers that where retail energy prices are not deregulated, there may be constraints on retailers to pass through the full amount. Origin considers that a universal deployment of interval meters is likely to be incompatible with any form of price regulation due to the inherent unwinding of cross-subsidies, many of which are to the benefit of vulnerable customers. Origin also notes that demand side management signals for energy needs to be further considered as it determines the need to construct new generating assets and transmission links.[134] Energex notes that the incentive to change network tariff structures is influenced largely by the ability and willingness of retailers to pass these pricing signals to customers. It suggests that to realise the full potential of demand side benefits both network and retail tariffs need to be aligned. [135]
Other Issues Raised	
Operational aspects of smart metering services	Jemena notes that smart metering infrastructure is increasingly recognised as part of the infrastructure used to provide normal distribution services rather than stand alone assets. Jemena highlights that smart metering infrastructure is used to perform a variety of roles, which may involve different technological, economic and regulatory issues. It also notes that while the Commission should give consideration to the technical and operational instruments that the National Smart Meter Program is developing, that is important to keep Rules

133 NSSC, Submission on the Draft Statement of Approach, p. 21

134 Origin Energy, Submission on the Draft Statement of Approach, pp. 13 - 14.

135 Energex, Submission on the Draft Statement of Approach, p. 8.

	related to the economic regulation of network investments separate from the technical and operational aspects of smart metering.[136] The NSSC submits that the distinction between 'metering services', 'smart metering services' and 'network services' requires deeper consideration as this may impact on: the services that may be subject to a Ministerial determination as distinct from services subject to a distribution determination; the parties that may provide the service; whether the service may be offered commercially instead of as a regulated service; treatment of costs and benefits; and the operation of the Rules provisions (e.g. classification of services, unbundling of charges etc). The NSSC also notes that smart metering infrastructure is not necessarily separate from electricity distribution infrastructure generally and this may affect the notion that the costs of assets can be viewed separately (e.g. tariffs). The NSSC notes that smart metering infrastructure will enable the provision of a range of services (e.g. remote connect/disconnect services, remote load control services, etc).[137]
Purpose of the mandate	EnergyAustralia notes that the policy purpose of a mandated roll-out is to allocate the costs to one party, as the potential benefits of accelerated smart metering are split between various stakeholders so as to make it uneconomic for one party alone to invest in smart metering infrastructure. It notes there will be short and long term benefits that will be societal and private and that DNSPs can not be attributed with or accountable for the realisation of these outcomes.[138]

[136] Jemena, Submission on the Draft Statement of Approach, p. 2.

[137] NSSC, Submission on the Draft Statement of Approach, pp. 2, 6, 7.

[138] EnergyAustralia , Submission to the Draft Statement of Approach, p.2.

Non-regulated revenues	Origin notes that there is the potential for DNSPs to generate revenue from new product innovations (e.g. supply capacity-based products) in the future using mandated smart metering infrastructure. It questions how this revenue will be dealt with under a regulated cost recovery process, and highlights the following issues: • a cross-subsidy may be paid by customers who are not marketed to or who do not accept the new service; • how will the unregulated revenue impact on the cost recovery required under the selected regulatory model; the need to ring-fence monopoly services from those provided on an unregulated basis; and • the allocation of any benefits under the cost recovery mechanism. Origin notes these issues may be more pertinent if barriers to entry exist following the mandate period. [139]

[139] Origin Energy, Submission on the Draft Statement of Approach, p. 5.