30 January 2014

Mr John Pierce
Australian Energy Market Commission
PO Box A2449
SYDNEY SOUTH NSW 1235

Dear Mr Pierce

Draft report: Framework for open access and common communication standards review (EMO 0028)

ENA welcomes the opportunity to make a submission to the AEMC review on the framework for open access and common communication standards.

ENA has been actively engaged, along with our members, in discussion with the AEMC on this review including within the stakeholder advisory working group established by the AEMC and remains committed to participating fully with your processes.

As advised in previous correspondence to the AEMC, ENA supports a metering framework which:

- Maintains current metering-enabled services and efficiently leverages existing investments
- Enables a transition to cost reflective network tariffs as quickly as practicable
- Benefits customers through economic achievement of future network operational benefits
- Enables a competitive, open and fair market for demand side services, and
- Facilitates broader adoption of smart meters while minimising cross-subsidies and any associated price impact on customers.

ENA is significantly concerned that this review relating to technical issues and standards is progressing in advance of consideration of the package of reforms resulting from the *Power of Choice* review, including the draft rule change to introduce metering contestability. ENA considers that AEMC should revise its current process in order to achieve an integrated approach to the current open access and common communication standards review and the related SCER rule changes, including the contestable metering services rule change. This needs to particularly take into account the needs of network businesses in preparing applications for their five year regulatory determinations.

ENA's detailed submission in response to the issues raised in the AEMC draft report is attached. I would be pleased to discuss this review and these broader issues with you at any time and can be contacted at the ENA offices on (02) 6272 1555.

Yours sincerely

John Bradley

Chief Executive Officer
Energy Networks Association

ENA response to the AEMC Draft Report

Framework for open access and common communication standards review

29 January 2014

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Executive Summary

Key Features of ENA Position

1. ENA appreciates the opportunity to comment on the AEMC draft report.
2. ENA is significantly concerned that this review relating to technical issues and standards is progressing in advance of consideration of the package of reforms resulting from the *Power of Choice* review, including draft rule change to introduce metering contestability. ENA considers that AEMC should revise its current process in order to achieve an integrated approach to the current open access and common communication standards review and the related SCER rule changes, including the contestable metering services rule change. This needs to particularly take into account the needs of network businesses in preparing applications for their five year regulatory determinations.
3. ENA supports a metering framework which:
    a. Maintains current metering-enabled services and efficiently leverages existing investments
    b. Enables a transition to cost reflective network tariffs as quickly as practicable
    c. Benefits customers through economic achievement of future network operational benefits
    d. Enables a competitive, open and fair market for demand side services, and
    e. Facilitates broader adoption of smart meters while minimising cross-subsidies and any associated price impact on customers.
4. Key issues that must be addressed to fully achieve the customer benefits sought by SCER and AEMC are:
    a. Whole of system benefits of existing network metering investments should be preserved
    b. Cross subsidies and any associated price impacts on customers should be minimised
    c. The full value of smart meters must be realised
5. Specific issues raised in the draft report with ENA proposed response are as below with details as attached:
    a. Open access model.
    b. Network investment and services
    c. Categorisation and cost of metering and related services
    d. Market roles
    e. Common market protocol
    f. Common metering protocol
    g. Security and service assurance

1 Introduction

1.1 Energy Networks Association

The Energy Networks Association (ENA) is the national industry association representing the businesses operating Australia's electricity transmission and distribution and gas distribution networks. Member businesses provide energy to virtually every household and business in Australia. ENA members own assets valued at over $100 billion in energy network infrastructure.

This submission by the ENA is in response to the Australian Energy Market Commission's (AEMC) draft report on the framework for open access and common communication standards.

1.2 Need for a coordinated approach on metering issues

ENA appreciates the opportunity provided by the AEMC to engage on the stakeholder advisory working group that was established to assist AEMC consideration in this review and the further opportunity to comment on the draft report. However, ENA considers that the detailed technical issues being addressed in this review relating to metering are critically related with establishment of the appropriate policy framework.

The draft report notes at Section 2.3 the comprehensive list of on-going projects related to 'promoting efficient investment in smart meters and increasing choices available to consumers in managing their electricity consumption'[1].

While AEMC notes their intention to 'take these other related projects into account', ENA is significantly concerned that this review relating to technical issues and standards is progressing in advance of consideration of the draft rule change to introduce metering contestability, which will consider the roles, responsibilities and obligations relating to provision and operation of meters and metering related services in a more fully contestable framework.

ENA understands that AEMC propose to finalise the open access and common communication standards review by the end of March 2014. ENA also understands that the draft rule change for increased competition in metering is likely to commence in late February or early March 2014, with completion unlikely before end 2014 at the very earliest.

Whilst clarification of aspects of the technical issues relating to access and communication standards and the implications of interoperability has been helpful, decision on these technical issues should not be finalised in advance of consideration of the metering framework. For clarity, ENA does not support finalisation of the open access and common communications standards review before decisions have been made on the metering framework. ENA considers that AEMC should revise and engage stakeholders on how its current process will achieve an integrated approach to the open access and common

[1] AEMC, *Draft report: Framework for open access and common communication standards review*, 19 December 2013, pp.6-7

communication standards review and the related SCER *Power of Choice* rule changes, including the review of metering contestability.

1.3 Addressing the Review

ENA responses to the specific issues raised in the Review are set out in the rest of our submission.

In Section 2 ENA argues that the range of related policy issues arising from the AEMC *Power of Choice* review require coordinated consideration and careful prioritisation.

In section 3 ENA addresses specific issues within the draft report.

Attachment A provides the ENA responses to the questions raised in the AEMC draft report.

ENA welcomes the opportunity to discuss the content of this submission with the AEMC.

2 Integrating outcomes from AEMC Power of Choice review

2.1 Power of Choice recommendations

The AEMC *Power of Choice* review resulted in a range of inter-related recommendations to encourage demand side responses to moderate the impact of peak demand, including enabling informed customer choice, pricing reform, access to information, enabling technology, incentives for Demand Side Participation (DSP) and energy efficiency.

AEMC Power of Choice: Summary extract

DSP provides a tool for consumers to actively participate in the market, by offering a suite of options for them to manage their electricity consumption and, in turn, their electricity expenditure. It includes actions such as energy efficiency, peak demand shifting, changing consumption patterns, and consumers generating their own electricity.

The recommendations form a package of integrated reforms and act to facilitate efficient DSP in two ways:

- Enabling consumers to see and access the value of taking up demand side options; and
- Enabling the market to support consumer choice through better incentives to capture the value of DSP options and through decreasing transaction costs and information barriers.

The Power of choice review has identified opportunities for consumers to make more informed choices about the way they use electricity. Consumers require tools - information, education, and technology, and flexible pricing options - to make efficient consumption decisions. Recommendations presented in this report will support these conditions and enable consumers to have more control of their electricity expenditure.

The review has also addressed the market conditions and incentives needed for network operators, retailers and other parties to maximise the potential of efficient DSP and respond to consumers' choices. Our recommendations will also help to support co-ordination along the different parts of the electricity supply chain to support efficient DSP.

Three key reforms can help achieve the efficient demand-supply balance in the market:

1. Rewarding DSP in the wholesale market: …

2. Providing appropriate consumer protection arrangements and gradually phasing in efficient and flexible pricing options: …

3. Introduce competition in metering services and develop a framework for smart meters and their services.

…

In addition to these key reforms, we are also recommending a number of supporting changes to

improve the ability of the market to maximise the potential of efficient demand side participation:

- Separating DSP actions from the sale and supply of electricity: …
- Enhancing consumers' ability to access consumption information: …
- Establishing a transparent framework for third parties offering demand management services in the National Energy Customer Framework: …
- Supporting retail competition through arrangements for retailer switching: ….
- Introducing a new and replacement smart meter program: …
- Improving demand forecasting for market operations in the NEM: …
- Establishing formal consultation when setting network tariffs: …
- Energy efficiency measures and polices: …

…

These recommendations can be implemented via a series of rule changes to the National Electricity Rules and National Energy Retail Rules plus a number of government programs.

2.2 Coordination challenges

The whole thrust of the Power of Choice review emphasised the interrelated nature of the issues and proposed outcomes. Implementation of key proposals was noted to be dependent upon acceptance and implementation of other key recommendations, such as advanced metering being required to assist pricing and consumer information to support changes to customer behaviour.

Following review and response by the Standing Council on Energy and Resources (SCER), AEMC is now committed to a series of activities relating to these recommendations, including:

- Rule change to reform distribution network pricing arrangements
- Rule change to provide increased competition in metering and related services
- Rule change to provide increased customer access to their energy and metering data
- Review of open access and common communication standards
- Reform of the Demand Management and Embedded Generation Incentive Scheme
- Review of framework for third parties offering Demand Side Participation (DSP)

ENA is concerned that these activities are progressing without due regard to the critical interactions essential to providing an optimum outcome. For example, consideration of reform of distribution network pricing and the review of open access and common communication standards (subject of the current submission), both of which are critically dependent upon the policy framework and availability of advanced meters, are proceeding separately and in advance of consideration of contestable metering.

ENA believes that it is essential that decisions are not finalised in these individual reviews before the overall package of reforms is considered in an integrated manner. In particular, ENA considers that the outcomes of the contestable metering rule change will impact the speed of availability of metering technology upon which the pricing reform depends. Further it is inappropriate to be finalising market structures and

technical standards in advance of the policy framework for contestable metering. Priority consideration of the metering framework is critical to ensure optimal realisation of metering and related investment values.

The ENA notes the complexity and interrelationships of these various *Power of Choice* workstreams and the implications of a national smart meter specification which may be thin or rich in functionality, the adoption by each jurisdiction of the national meter specification as a base for all new and replacement metering or not, and the ability for a MC, retailer or customer to choose a meter other than the minimum standard adopted by the jurisdictions. The ENA recognise that these aspects need to be taken into account regarding the development and potential cost/benefit of the common market gateway and the complex and close to real time new B2B arrangements. For Victoria, an important aspect is to recognise that the network data is used in real time now to manage network loading in extreme weather events, manage network compliance regarding voltage, actively manage customer supply with ping capability etc. Consequently, despite a common market gateway and complex B2B arrangements, the introduction of metering contestability will still result in the loss of some benefits lost for Victorian consumers. It is important to consider the cost/benefit of leaving the Victorian AMI meter in place as a network device, whilst not preventing metering competition compared to the industry development time and cost of implementing the complex B2B arrangements. ENA consider that these decisions cannot be made in isolation from the other aspects of the *Power of Choice* workstreams, including the AEMO and jurisdiction decisions.

2.3 The full value of smart meters must be realised

There has been insufficient recognition of the need for the metering framework to foster network-level outcomes which are important to customers including safety, greater access to power quality and outage information; and improved outcomes for reliability of supply. Under the proposed contestable metering framework, a Financially Responsible Market Participant (FRMP) does not derive any competitive advantage from enabling benefits that are not directly visible to the customer at the time of installation. Hence, where the minimum specification is a guideline only, FRMPs may prefer to install a lower-cost meter that is not capable of network functions, even if the incremental cost of a more capable meter is small relative to the total value of these functions to the community over the life of the meter. Network functions, which provide whole of system benefits, can generally be added at relatively low cost into the meter if incorporated at the design stage, but will be more expensive if they must be augmented later or provided through a duplicate meter, as has occurred in New Zealand.

The framework is yet to establish a clear ability for networks to rollout meters in line with a business case, as intended in the AEMC *Power of Choice* review. Advanced metering enables more effective demand management and network utilisation programs if Distributors are able to utilise advanced metering installations in a regulated environment. Given the significance of network infrastructure costs, potential efficiency benefits (such as network tariff reform) can be up to double the value of those realised from retailer/energy services. AEMC representatives have indicated that a targeted network-led rollout may still need to be 'initiated by customer agreement' which is impractical at scale and constrains the potential benefits to customers from network efficiencies.

The effect of the current Rules is that many network meters that could operate to provide customer and system-level benefits cannot be interrogated remotely. Meters that are capable of being remotely read continue to be installed due to replacement activity (driven by factors such as take up of solar PV systems) but can only be interrogated manually, with significant opportunities to better manage the network and associated services being lost to distributors, retailers and customers. Distributors have been limited in their opportunity to interrogate interval capable metering remotely to extract a range of key data sets available in the meters including voltage events and peak demand. Distributors such as Ergon Energy currently configure specific meters to record broader data sets than just kilowatt hour data but can only interrogate through manual probe readings at site, unless the customer or retailer is prepared to pay the metering charges in addition to their energy charges.

2.4 Network priorities

Network companies in Queensland, New South Wales, South Australia and Victoria are currently preparing material for their imminent regulatory determination processes.

Critical within these processes (amongst other details) is consideration of optimal solutions to address network constraints. The uncertainty relating to future investment capability in metering and related services by network companies is introducing significant complication to the development of these network applications for some jurisdictions. The effective utilisation of metering infrastructure as a non-network solution requires clarity in the ability of networks to install or commission smart meters and the incentive support available to them to favour such alternatives to network builds.

The optimal delivery of network services and responsibilities may be jeopardised by delay in resolution of these issues.

ENA recommends that the AEMC prioritise review of decisions critical for network determinations including the metering contestability rule change and the demand management and embedded generation incentive scheme rule change as a matter of urgency. ENA seeks urgent advice on how the AEMC will ensure that the complex interdependencies of the separate related reviews and rule changes arising from the AEMC *Power of Choice* review will be addressed to optimise the outcomes for customers and progress the most critical elements as essential priorities.

3 Specific issues of concern in the draft report

ENA supports a metering framework which:

- Maintains current metering-enabled services and efficiently leverages existing investments
- Enables a transition to cost reflective network tariffs as quickly as practicable
- Benefits customers through economic achievement of future network operational benefits
- Enables a competitive, open and fair market for demand side services, and
- Facilitates broader adoption of smart meters while minimising cross-subsidies and any associated price impact on customers.

ENA considers that the draft report does not recognise or adequately protect the network-data and network service improvements which can be gained in a smart metering framework which will materially impact customer outcomes in relation to whole of system efficiency and operations.

The following specific issues within the AEMC draft report are of most concern to ENA.

- Open access model.
- Network services
- Categorisation and cost of services
- Market roles
- Common market protocol
- Common metering protocol
- Security/service assurance

These issues will be considered in the balance of this section.

3.1 Open access model

AEMC notes that it seeks to provide requirements for smart meter open access and common communication standards that provide:

- An efficient level of interoperability of the smart meter infrastructure; and
- Appropriate levels of access to the smart meter functionality, while allowing effective management of data security, congestion management and message validation[2].

ENA endorses these objectives, noting the essential qualifications relating to efficiency, effectiveness and appropriateness of attributes. However, ENA considers that the assessment of options within the review to date does not enable adequate consideration of these matters, other than on a very general level. In addition, the assessment does not provide appropriate weight to maintenance of current network services.

[2] AEMC, *Draft report: Framework for open access and common communication standards review*, 19 December 2013, p.22

3.2 Network investment and services

Whole of system benefits of existing network metering investments should be preserved. Networks have already invested to varying degrees in advanced meters and associated telecommunications infrastructure, in line with prevailing policy directions at the time and with the endorsement of the regulator. To the extent that customers have already paid for these, they are entitled to enjoy the full benefits of these investments over the lifetime of the associated assets. Future rule changes and technical frameworks must ensure:

(a) that assets including meters are not displaced prematurely; and

(b) that if a meter installed by a network business is replaced by a third party:

- there is no reversion of, or reduction in, functionality available to the network, including existing load control functions; and
- there is no charge to the network to retain access to network functions (this would cause the customer to pay again for a benefit they have already funded)

Distribution businesses rely on load control to manage up to 60% of peak demand in some locations and have direct experience of metering replacement leading to loss of load control functionality. This may also extend to voltage and outage data, demand response arrangements and ping capability which are being utilised by a number of Victorian distributors. It is critically important that these facilities be maintained in fact as well as assertion. The proposals within draft report do not provide ENA with confidence that the network services can be appropriately maintained within the proposed framework. This is further considered below.

3.3 Categorisation and cost of services

ENA considers that common standards for metering should be expressed in terms of metering services, not meter functions or protocols. A metering service is a service available to market participants which is provided via the Metering Coordinator (MC)[3] using the metering installation. A metering service is accessed via a common market gateway (see below) and all market participants that access the service do so using the same standard market interface.

A metering service comprises:

- One or more functions
- The standard interface market participants use to access those functions through the common market gateway
- Performance requirements (e.g. timeliness and reliability of data delivery)
- Access rights (which parties have the right to access the service)

[3] The term Metering Coordinator (MC) will be utilised in this paper, although final designation of this function by AEMC/SCER will be dependent on the outcome of the rule change relating to contestable metering, which is expected to commence in February 2014.

3.3.1 Metering functions/services

AEMC categorise metering functions (services) as follows[4]:

> *For the purposes of this advice, the smart meter functions have been placed in the following classifications:*
>
> - *basic functions - this includes existing metrology functions, as currently defined in the rules for type 1 to 4 metering installations, plus metering support functions for maintaining the smart metering system;*
> - *advanced functions - the other functions that are fully defined in the smart meter functionality specification, which is a document that details and defines the functions of smart meters; and*
> - *new functions - are functions that are not specified in the smart meter functionality specification but may be developed by one or more stakeholders.*

ENA endorses the structure of the AEMC's 3 categorisation headings but has a different view on the constituent services and functions. ENA believes the specification of services and functions in the three categories requires further consideration as this allocation is critically important to delivery and potential cost of these services/functions.

The balance of this section proposes

- ENA's description of metering service functionality for these categories and
- the service delivery implications of this categorisation.

ENA categorisation of metering functions and services

ENA propose the following categorisation of metering services, based on the functions defined in the Smart Metering Infrastructure (SMI) Minimum Functionality Specification, and taking into account the principle that services that are widely available in domestic metering installations today are Basic Services.

ENA notes and fully endorses the principle in the draft rule change request on contestable metering[5] that existing load control services and functionality (critical to network management of peak demand and hence capital and operating costs) must be maintained if a meter is replaced. ENA considers that this requires that these services be designated as Basic Services.

[4] AEMC *draft report: framework for open access and common communication standards*, 2013, p. 12
[5] SCER Rule change request, *Introducing a new framework in the National Electricity Rules that provides for increased competition in metering and related services*, October 2013, p.12, p.28 (section 2.8)

The following table provides ENA's categorisation of metering functions and services.

Basic Services

7.1 Measurement and recording

7.2 Remote acquisition

Daily reads

- Energy (per element interval and accumulation, active and reactive, import / export)
- Event logs (to include all events logged by the meter in accordance with 7.10 below in the past 24 hours)

Special (on demand) reads

- Per SMI specification 7.2 performance and functionality requirements

Note: SMI 7.2.1 (d) – multi-utility meter reading via HAN is considered to be an Advanced Service and is excluded

7.6 Load management - controlled load contactor (Existing Load Control services)

The SMI Minimum Functionality Specification defines a rich set of control functions for the controlled load contactor; it will be beneficial to separate these so that the capabilities of today's time-based control and ripple control systems are captured as Basic Services, with new capabilities reflected in Advanced Services. Delivery of existing Basic Load Control Services is critical to maintaining system load within network capacity, as they operate to reduce peak demand.

7.7 Supply contactor operation

- Enable remote turn on/turn off of the customer premise by closing or opening the supply contactor

7.10 Quality of supply and other event recording

- To include logging in event log (retrieved as part of daily reads) all events in SMI Specification 7.10.1(h)
- Real time reporting of events other than those associated with meter loss of supply is excluded, but may be an Advanced Service

7.11 Meter loss of supply detection

- Event notification in real time to accredited parties subscribing to notifications through the market gateway, including supply restoration events, with delivery times and reliability according to the performance requirements in the SMI Specification

7.12 Remote meter service checking

- As defined in the SMI specification

Additional function/service proposed by ENA: Restoration of supply notification

- To advise when supply has been restored after outage.

Advanced Services
7.6 Load management - controlled load contactor (New Load Control Services) • The SMI Minimum Functionality Specification defines a rich set of control functions for the controlled load contactor; it will be beneficial to separate these so that the capabilities of today's time-based control and ripple control systems are captured as Basic Services, with new capabilities reflected in Advanced Services. Delivery of existing Basic Load Control Services is critical to maintaining system load within network capacity, as they operate to reduce peak demand. Additional 'Advanced Load Control Services' may be subject to a nominal, incremental cost charge (which may require some regulatory oversight) as an advanced service.
7.8 Supply capacity control
7.9 HAN using open standard • If a HAN is enabled at a metering installation, there shall be no restriction on the customer's right to pair any device of their choosing with the meter in the home. It is not desirable for the MC or retailer to exercise control over access to the HAN in order to prevent the customer from using any in-home device other than one provided by the MC or retailer, as this will stifle competition for demand-side services.
7.20 Meter communications: issuing messages and commands
7.21 Customer supply (safety) monitoring

The allocation of services to the categories above does not include the full range of smart meter functionality. The following functions defined in the SMI Minimum Functionality Specification do not map directly to services at the market level. They relate to metrology, basic meter functions and facilities required by the meter operator for the provision and maintenance of metering services, such as remote software updates. These functions are not visible at the market level. They may be categorised as 'Basic functions', but are not included in this categorisation in this paper as they do not related to service delivery to parties (including networks), which is the basis of this analysis. They are included below for clarity.

Other Functions required for meter management

- 7.1 Measurement and recording
- 7.3 Local acquisition
- 7.4 Visible display on meter
- 7.5 Meter clock synchronisation
- 7.13 Meter settings reconfiguration
- 7.14 Software upgrades
- 7.15 Plug and play device commissioning
- 7.16 Communications and data security
- 7.17 Tamper detection.
- 7.18 Interoperability for meters/devices at application layer
- 7.19 Hardware component interoperability

Service delivery

ENA considers that service delivery in line with this categorisation should be as follows:

Basic Services:

- A MC operating a smart meter[6] in the market must provide all Basic Services for that meter.
- Basic Services provided by a MC, where their meter replaced a network meter, will include all services previously available to the network.
- The cost of providing Basic Services is fully recovered by the MC through their contract with the customer or retailer.
- Another party that is accredited and authorised to access a Basic Service through the common gateway does so free of charge, as is the case today with the provision of interval data through the Australian Energy Market Operator (AEMO) B2B gateway.

Advanced Services:

- Advanced Services are services that are optional but, to the extent that they are provided, they must be provided in a standard way to all accredited and authorised market participants through the common market gateway.
- A MC may not offer a metering service that is substantially similar to an Advanced Service to any party (e.g. under a private commercial agreement between the two parties) without also offering the corresponding Advanced Service through the common market gateway.
- While Advanced Services are optional, every smart metering installation must be capable of supporting all Advanced Services in its installed configuration. That is, it must be possible to enable any Advanced Service at a smart metering installation without adding or changing hardware components or attending the customer premises.
- When a meter is replaced or the retailer or customer changes MC, the new MC must continue to provide all Advanced Services that were previously provided for that metering installation.
- Accredited and authorised parties wishing to access Advanced Services do so under a commercial arrangement with the MC, which may include a reasonable fee for access. Setting these fees may require some regulatory oversight to ensure that they are reasonable.

New Services:

- New Services are metering services that are not Basic Services or Advanced Services.
- New Services arise from innovation, enable MCs and other market participants to differentiate their offerings and add value, and may be proprietary. MCs and other market participants entering into commercial arrangements to develop and use new metering services do not have any requirement to disclose any associated intellectual property or make these services available through the public gateway.

[6] A smart meter may for example be designated a 'Type 8' meter to differentiate it from a 'Type 4' remote access interval meter

- In time, a new and innovative service may become commoditised as multiple parties develop their own equivalents. Market participants may then determine that it is appropriate and beneficial to all to agree on a common standard, and could request that AEMO add the new service to the set of Advanced Services available through the common market gateway.

Service costs

Regarding costs, ENA considers that cross-subsidies and any associated price impact on consumers should be minimised. AEMC seeks advice on whether efficient pricing outcomes for access changes would be likely to emerge under a contestable market for the provision of services enabled by smart meters. ENA considers that the new framework may effectively encourage exploitative pricing and the cross-subsidy of contestable metering.

Early consideration by the AEMC's consultants on this issue [7] indicated it would be acceptable to the consultant if the only discipline on excessive Metering Coordinator (MC) pricing was the cost of 'bypass' achieved by replicating the infrastructure (ie. Network businesses installing their own meters or in-home devices). This creates a perverse incentive for excessive profit-taking by the MC, which may then cross-subsidise competitive services offered to FRMPs. This would ultimately increase costs to the consumer because (a) it will lead to inefficient pricing for the provision of network services, the cost of which is ultimately borne by the customer; and (b) it may stifle competition in the market for demand-side services because new market participants cannot access metering services at the same price as the FRMP. These outcomes are directly opposed to the goals of the AEMC and SCER as we understand them.

3.4 Market roles

The AEMC created a role of Smart Meter Provider (SMP) for the purpose of analysis and understanding the additional responsibilities required under the deployment of smart meter infrastructure. AEMC noted that possible options for the SMP include:

- A separate SMP role to increase flexibility of the commercial arrangements available to the MC
- Assigning the SMP's responsibilities to either the Meter Provider (MP) or Meter Data Provider (MDP), or
- Sharing the SMP's responsibilities between the MP and MDP.

ENA does not support the additional cost and complexity inherent in creating a new role of SMP, where there is already significant overlap in the current roles of MP and MDP. AEMC touches upon the potential roles of third party service providers and references the role of Metering Coordinator, noting that if such roles operate in the market, attention will need to be given to whether they need to be accredited by AEMO for access to smart meter functionality.

[7] Commentary on slides 21 to 27 of the AEMC presentation prepared for the Stakeholder Advisory Working Group meeting 5 December 2013

New market roles with significant operational responsibilities, interaction and impacts on other market participants and customers will need appropriate regulatory constraints. ENA believes that development of significant new roles and responsibilities should be considered within the remit of the metering contestability rule change. As noted previously in this submission, ENA notes that the metering contestability rule change process has not yet commenced and reiterates our view that that rule change process should be coordinated with consideration of technical detail.

3.5 Common market protocol

In considering interoperability, AEMC recommend that a common market protocol be used for smart meter communications, as this is likely to promote efficient communications between the multiple accredited parties and the multiple SMPs (or, in ENA's view, the parties performing the tasks assigned by AEMC to this hypothetical role).

The energy market is familiar with the operation and value of common market protocols in the National Energy Market. ENA considers that the focus in these discussions should be on efficient delivery of metering services. We would expect that the common market gateway will be an evolution of the current AEMO B2B services and, when/where it makes economic and technical sense, new functions may incorporate elements of a meter protocol such as COSEM/DLSM.

ENA expects that the common market protocol would be developed by industry under the guidance of the AEMO. The common market protocol would be expected to fully define the basic services and advanced services. Where new functions and services become available, these are likely to be initially developed and tested by competitive parties in the market. As and if these services are proven to be of value and expand to establish critical mass, they could be defined for inclusion within the common market protocol.

3.6 Common Meter protocol

ENA notes the discussion within the AEMC draft report on the benefits of inclusion of common meter protocols to extend interoperability within the market and support competition in the procurement of metering infrastructure in the future.

The ENA supports a Common Meter Protocol but only if there are appropriate transitional arrangements in place to address legacy infrastructure issues. It will be vital that the implementation of a common metering protocol recognises that the transition to smart metering will take place over a period of years and takes account of the current differences in metering stock and the penetration of advanced metering in Australian electricity markets.

Appropriate transitional arrangements for the common metering protocol must ensure that full cost recovery is maintained for network businesses, including the cost of any transitional stages to a common meter protocol.

Additionally, there may be scope for some transitional issue to be accommodated by the market gateway platform, rather than at the meter level, and this should be evaluated by the AEMC in the development of the transition framework.

3.7 Security and service assurance

The AEMC draft report touches upon security issues relating to the development of the smart metering framework. It notes the need to limit unauthorized access to the smart meter's functionality and the need to manage 'congestion' and prioritization of communications through the system. The draft report briefly references the need '*to allow some accredited parties to have priority access to the smart meter's functionality during times of system emergency*[8]' The draft report allocates the role of maintaining and assuring these security elements to the proposed SMP.

ENA considers that the draft report does not adequately recognise or protect the critical network security implications in the proposed interoperability model. As with other aspects of the draft report, ENA considers that the key roles and responsibilities must be considered within the proposed meter contestability rule change before technical and system detail is considered.

[8] AEMC *draft report: framework for open access and common communication standards*, 2013, p.21

Attachment A: Responses to AEMC Draft Report Questions

Issue no.	Issue and reference	AEMC Recommendation/Questions	ENA Response
1	Common Market Protocol Section 5.1	We recommend that a common market protocol be used for smart meter communications…The common market protocol could either: • Be based on the internationally accepted meter protocol DLMS/COSEM; or • Be a services based protocol specifically developed for smart meter communications in the NEM	There has been general agreement on development of a common market protocol and ENA supports this position.
2	Section 5.3.4	We are seeking stakeholder views on the appropriate selections of a common market protocol. In particular: • Should an internationally accepted meter protocol form the foundation of the NEM common market protocol? • Is DLSM/COSEM sufficiently well developed to be used as the foundation for a market protocol, given the potentially [sic] synergies that exist with smart grid interoperability and other meter standards? • Would the costs of developing an Australian specific services based common market protocol be likely to deliver sufficient benefit compared to using an internationally accepted metering protocol? • Would extensions of the B2B gateway present a viable option for the development of a services based common market protocol?	Within the AEMC stakeholder working group, there has been significant support for reliance upon AEMO B2B gateway. ENA confirms support for common market protocol. However the focus should be on ensuring provision of metering services, rather than the meter or 'protocol'. We expect that the market gateway will be an evolution of the current B2B services and, when/where it makes sense, new functions may incorporate elements of a meter protocol such as DLSM.
3	Maintenance of the common market protocol	We recommend that the development and on-going maintenance of the common market protocol be undertaken by an independent entity such as AEMO. We welcome comments on whether these are the appropriate parties	Within the AEMC stakeholder working Group there has been general support for AEMO as responsible for maintenance of the common market protocol

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	Section 5.1		
4	Section 5.4.1	We are seeking stakeholder views on the appropriate entity to maintain the documentation for a common market protocol. In particular: • Would AEMO be the most appropriate entity to develop and maintain the common market protocol? • Is there the potential for the responsible entity to adversely impact on the competitive provision of DSP and related services? • Would AEMO be regarded as sufficiently neutral, should the common market protocol be based on the existing B2B arrangements, as the B2B procedures are maintained by the Information Exchange Committee, established by AEMO?	ENA endorses AEMO as responsible to maintain the common market protocol
5	Adding new functions to the common market protocol Section 5.4.2	We are seeking stakeholder's views on whether the accredited parties and MPs should be required to define new functions in the smart meter functionality specification before they can be implemented. In particular: • Would requiring new functions to be fully documented before they are used stifle innovation and reduce competition in the provision of DSP and related services? • Would not requiring new function to be documented be likely to lead to reduced levels of interoperability, and hence reduce competition in the provision of DSP and related services in the longer term?	Within the AEMC Stakeholder Working Group there has been general agreement that new functions would develop via commercial agreements. When appropriate scope/scale/ critical mass had developed, these could be incorporated into the smart meter functionality. ENA endorses this view.
6	Common Meter Protocol	We are seeking comment on the following options: • Adopting a common meter protocol based on the internationally accepted DLSM/COSEM protocol;	The ENA supports a Common Meter Protocol but only if there are appropriate transitional arrangements in place to address legacy

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	Section 5.1.1	• Adopting a common protocol based on the DLSM/COSM protocol, except in Victoria where protocol translation could accommodate existing metering investment; and • No common meter protocol is adopted and protocol translation is allowed throughout the NEM	infrastructure issues. Appropriate transitional arrangements for the common metering protocol must ensure that full cost recovery is maintained for network businesses, including the cost of any transitional stages to a common meter protocol. Additionally, ENA considers that there may be scope for some transitional issues to be accommodated by the market gateway platform, rather than at the meter level, and this should be evaluated by the AEMC in the development of the transition framework.
7	Section 5.5	We are seeking stakeholder's views on whether a common meter protocol should be adopted, or whether SMPs should be able to use protocol translators. In particular: • should there be a common meter protocol? • if a common meter protocol is required, should it use the internationally accepted DLMS/COSEM protocol as its foundation? • if a common meter protocol is required, should existing Victorian smart meter operators be required to offer a protocol translation to the new common meter protocol? • without a common meter protocol do proprietary meter protocols (and protocol translations) be more likely to support competition in DSP and related services?	See above
8	Meter point of entry and market point of	Allowing direct access to the meter using a common market protocol, which would also be a common meter protocol, would give the smart meter infrastructure a high	ENA does not support a system requiring direct access to the meter.

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	entry Section 5.6	degree of interoperability… Having a market point of entry improves the ability of the SMP to manage security of access to the smart meter's functionality. This architecture also allows the SMP to implement congestion management by prioritising of communications with the smart meter and to validate messages sent to the smart meter. In addition, having a market point of entry allows for the possibility of the meter protocol being different to the market protocol.	ENA supports a system requiring a market point of entry to the system. Precisely how this would operate is yet to be decided.
9	Market point of entry and common meter protocol	While a market point of entry offers the possibility of using protocol translators, the interoperability of the infrastructure would be increased if a common meter protocol is used. This architecture allows the SMP to effectively manage access to the smart meter infrastructure through the market point of entry… We are seeking stakeholder's views on whether the protocols at the meter point of entry and the market point of entry support access to new functionality without the need to make any modifications to the SMP software.	At this point, AEMC appears to be supporting both common market protocol and common meter protocol. See views above
10	Proposed smart meter communications architecture Section 5.6.4	We are seeking stakeholder's views on the proposed architectures above. In particular, should the proposed architecture of: • a protocol translation at the point of entry (Figure 5.1) be supported in the NEM? • a common meter and market protocol (Figure 5.2) be supported in the NEM? • the proposed protocol that allows communication via either the meter protocol or the market protocol (Figure 5.3) be supported in the NEM? In addition, we are seeking stakeholder's views on whether changes to the NER would be required to allow the SMP to manage access, security, congestion and message	ENA's initial view is that these should be developed by industry task forces and maintained with industry input. The strait-jacket of regulation may constrain evolution. Managing access and security will be critical in some manner to protect network security. Before answering the question on the SMP managing access, etc, the decision on development of an SMP role needs to be decided.

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		validation required for smart meter deployments?	Consideration of market roles needs to be undertaken in the context of the metering contestability rule change. Some parts of the SMP role are already imposed on other market participants, eg MDP. It is difficult to respond definitively to this question without considering the prospective role of the Metering Coordinator.
11	Smart meter provider Section 5.7	We have created the role of SMP for the purposes of analysis and understanding the additional responsibilities required under the deployment of smart meter infrastructure. Possible options for the SMP include: • a separate SMP role to increase the flexibility of the commercial arrangements available to the MC; • assigning the SMP's responsibilities to either the MP or MDP;or • sharing the SMP's responsibilities between the MP and MDP. Consideration of whether it could be part of the MC role would be required if that rule is implemented following the Commission's considerations of the competitive metering rule change request. We note that separate SMP role would not preclude any one entity engaging in one or more of the MC, MP, MDP and SMP roles. In addition, it would be expected that access to the smart meter infrastructure's point of entry would be negotiated with MC. We are seeking comment on whether the SMP's responsibilities should be retained in a separate role, or whether these responsibilities should be assigned to an existing entity.	See above ENA does not support establishment of a new SMP role, but has not yet finalised a position on how these tasks should be managed. Some parts of this role are already imposed on other market participants, eg MDP or RP/MC.
12	Regulation of access	We will further consider whether regulation should be required for access to smart metering infrastructure, including whether any access charges should be regulated, in	

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	Section 6	the remainder of the review.	
13	Section 6.1	We note that the NER sets out rights and obligations for metering data. These provisions are to be maintained. The considerations of this review relate to impacts of the introduction of smart metering infrastructure. We welcome comments on: • whether the right of access to smart meters should be enforced under the NER and, if so, to what degree (e.g. should right of access apply to all smart meter functions or in relation to providing certain services); • what are the contractual arrangements that are expected to be in place and to what extent these contractual relationships are to be supported by rights under the NER; • how the market (the NEM as a whole or the retail energy market) would be impacted if participants are denied access to smart meters; how would different participants be impacted;& • how the existing rights and obligations relating to the use of metering infrastructure and metering data would impacted by smart meters.	ENA has provided analysis within our submission on access to metering services and functions and costs. See sections 3.2 and 3.3.
14	Services provided Section 6.2	Simply, the service provided by smart meters could be separated into 'metrology services' and 'other services'. The metrology services would be the energy measurement services, which are also currently provided by 'basic meters'. The measurement services could be considered essential to the NEM as they are required to allow settlement and billing to occur. Whereas further consideration is required of how to define other potential services that may be enabled by smart metering technology.[emphasis added] The types of services that are being provided, and whether there would be alternative	See above. Refer to sections 3.2 and 3.3 of the submission

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		means of providing these services, would impact the extent (and type) of access regulation that may be required. We welcome comments on: • how the services that could be enabled by smart meters be defined and should these services be subject to regulation; • whether there would there be alternative means of providing these services other than through a smart meter.	
15	Charging for services Section 6.3	We consider whether access charges should be regulated warrants further consideration. We will assess the extent to which potential inefficiencies exist. If a problem is identified, we would then need to assess how the problem could be addressed. This will require considering the options for price regulation within the current regulatory framework and having regard to potential developments such as SCER's work on the regulation of third party energy service providers and the metering contestability rule change request. We would need to be cognisant that any regulation needs to be proportional to the problem we are attempting to address. We welcome comments on: • under a contestable market for the provision of services enabled by smart meters, could we be confident that efficient pricing outcomes for access charges would be likely to emerge; and • whether there would be risks to efficient pricing outcomes and, if so, how the risks may they be addressed.	See above. Refer to sections 3.2 and 3.3 of the submission.
16	Consumer	Our focus for the remainder of this review is considering whether any of our recommendations under this review will pose new risks to consumers and what these	ENA has no view at this time but supports validity

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	protection Section 6.4	risks may be. If new risks could be introduced, we will assess whether the existing consumer protection mechanisms would provide sufficient protection or whether new measures may be required. We welcome comments on these issues.	of effective and efficient customer protections
17	Accreditation of parties Section 6.5.1	Third party service provides and the SMPs, if such a role is introduced, are not a part of the existing regulatory framework for licensing or accreditation. The role of the SMP appears to be linked to that of the MP and therefore accreditation by AEMO may appear appropriate. Third party service providers on the other hand, would undertake roles in the market that could be relatively different from existing market participants. If third party service providers are to have obligations under the NER, consideration is required as to whether they need to be defined as market participants and register with AEMO. Whether they need to accredited by AEMO for access to smart meter functionality also requires further consideration. We welcome comments on these issues. However, we acknowledge that SCER is considering the requirements for regulating third party service providers under the broader regulatory framework. Whether third party service providers should be registered market participants and be accredited will depend on the outcomes of SCER's decisions for the broader regulatory framework.	ENA supports third party energy service providers being appropriately accredited. However, this will require further consideration as the scale and operation of these roles is developed.
18	Smart metering standing data Section 6.5.2	Supporting discovery of smart metering standing data requires further assessment. There are mechanisms under the NER that provide for 'NMI discovery'.34 These provisions could be expanded to provide for the discovery of smart metering standing data. However, clarifications would be required on who would be accessing smart metering standing data and under what circumstances.	This effectively also covers the issue of meter type, or being able to identify the functionality of a meter at a premise. ENA considers that, at the least, smart meters will need to be distinguishable from 'ordinary' type 4 meters, for example by designation as a 'type 8' meter.