



Australian Energy Market Commission

CONSULTATION PAPER

Implementation advice on the shared market protocol

18 December 2014

REVIEW

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About the AEMC

The AEMC reports to the Council of Australian Governments (COAG) through the COAG Energy Council. We have two functions. We make and amend the national electricity, gas and energy retail rules and conduct independent reviews for the COAG Energy Council.

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Summary

The Australian Energy Market Commission has been requested to provide advice to the COAG Energy Council on implementing a shared market protocol that will provide a standard form of communication between parties wishing to seek access to the services provided by advanced metering infrastructure. The advice will include a draft rule change request for consideration by the COAG Energy Council.

This advice is supplementary to the advice provided to the COAG Energy Council by the Commission in March 2014 on a framework for open access and common communication standards. As such, this advice is guided by the terms of reference for the open access advice and there is not a separate terms of reference for this supplementary advice.

This advice will also complement the current rule change process on expanding competition in metering and related services. These projects form part of the package of reforms to implement the recommendations from the Power of Choice review to enable consumers to participate more actively in the electricity market.

This consultation paper outlines the issues that will be considered by the Commission in developing its advice. The issues include the governance arrangements for developing and maintaining a shared market protocol, how a shared market protocol will be defined in the NER, the roles and responsibilities of parties with regard to a shared market protocol and transitional arrangements.

Submissions on this consultation paper are requested to be provided no later than 5pm, Thursday 12 February 2015. Stakeholders are encouraged to include any relevant information or comments in their submissions.

The next steps will include providing a draft of the advice, including a draft of the proposed rule, for consultation on 23 April 2015. The final advice is anticipated to be provided to the COAG Energy Council on 2 July 2015.

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1 Introduction

The Australian Energy Market Commission (AEMC or Commission) has been requested by the COAG Energy Council to provide advice on implementing a shared market protocol. This paper sets out the scope and proposed approach for developing that advice. It also sets out a number of questions for stakeholder comment.

1.1 Context and purpose of advice

In its advice on a framework for open access and common communication standards¹ (open access advice) to the COAG Energy Council, the Commission recommended that a shared market protocol be adopted to define a method of communication that can be used between parties accessing the services provided by advanced metering infrastructure.

The open access advice is strongly interdependent with issues being examined in the expanding competition in metering and related services rule change process (competition in metering). For example, the open access advice recommended new 'gatekeeper' functions that would manage access to services provided by advanced metering infrastructure, but the scope of this role and who would perform it are being defined in the competition in metering rule change process. Therefore, in the open access advice the Commission also recommended that it provide supplementary advice at a later date to define and implement a shared market protocol.

The Commission expects to provide this supplementary advice to the COAG Energy Council at the same time as the final rule determination on the competition in metering rule change is made. This is anticipated to be in July 2015.

1.1.1 What is a shared market protocol?

A shared market protocol is an electronic platform that allows parties to communicate with each other regarding the services that will be offered by advanced metering infrastructure. It also defines the format of the associated messages sent between the parties to provide those services.

A shared market protocol differs from a 'common market protocol' as originally explored in the open access advice. A common market protocol is a mandatory form of communication for all parties to use. In comparison, a shared market protocol is a default method of communication and does not preclude parties from agreeing to alternative methods of communication.

The Commission considered that a shared market protocol would promote competition by reducing barriers to entry for new retailers and energy service providers, while not inhibiting innovation. For example, a shared market protocol would prevent a

¹ AEMC 2014, Framework for open access and common communication standards, Report, 31 March 2014.

situation where an energy service provider needs to have different systems to communicate with different metering providers.

A shared market protocol would also promote outcomes for consumers. Improving the products and services available to consumers allows them to choose the products and services that are right for them and help them to manage their energy needs at a lower cost.

As one of the key purposes of this advice is to provide a draft rule change request to the COAG Energy Council, this consultation paper seeks to identify any arrangements related to a shared market protocol that would need to be included in the National Electricity Rules (NER).

1.1.2 Interactions with B2B arrangements

The open access advice recommended that a shared market protocol would involve an expansion of the current B2B arrangements in the NER (described at 2.2 below). However, it also noted a risk that an expanded B2B e-hub may not be able to deliver requirements related to a higher speed of delivery, increased volume of communications or increased security and congestion requirements that may be necessary for advanced metering services.² For example, the B2B e-hub would not be able to deliver 'instant' response messages that are important for delivering some advanced metering services.

Another difference in requirements may be the types of parties that will use a shared market protocol. The competition in metering rule change request has proposed some significant changes to metering arrangements in the NER. The types of parties accessing the services available from the advanced metering infrastructure and associated business communications are expected to expand beyond the retailer and distributor. It is expected to include metering coordinators and other third party energy service providers.

Considering the different participants that may use a shared market protocol and its increased technical requirements, the Commission is proposing that this advice not be limited to considering only an expansion of the B2B arrangements. Initial discussions with the Australian Energy Market Operator (AEMO) and stakeholders have identified concerns that the existing B2B e-hub might not be suitable to deliver all of the requirements of a shared market protocol. While the existing arrangements are useful for guidance, the Commission is also seeking stakeholder feedback on whether new arrangements would be more suitable.

The interactions between the B2B arrangements and the shared market protocol are discussed further in Chapter 6.

² *ibid.* pp20-21.

1.1.3 Interactions with the minimum specification

The competition in metering rule change process is developing a framework to introduce contestability in the provision of metering services. This includes establishing a metering coordinator role, which would take on the current role of the responsible person as well as new obligations that relate to the provision of advanced metering services.

The AEMC's work on the competition in metering rule change also includes developing a framework for a minimum specification that will be required of advanced metering infrastructure. Therefore, the circumstances in which a meter must meet the minimum specification and the associated governance arrangements will not be certain until the final rule determination is made.

To assist in developing the minimum specification, the COAG Energy Council requested AEMO to prepare advice on the minimum specification that should apply under a competitive deployment of advanced metering infrastructure in the NEM.³ AEMO recommended that the minimum specification should be based on services (instead of meter functionality) and that the services be divided into:

- primary services – services that should be considered as mandatory; and
- secondary and value added services – services that AEMO did not recommend as mandatory for a competitive deployment but likely to be available by negotiation.

As the Commission is still finalising the competition in metering rule change, this advice will need to include how a shared market protocol could potentially interact with both mandatory and non-mandatory services.

1.2 Key principles

Implementing a shared market protocol will need to contribute to the achievement of the national electricity objective (NEO), which 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.”⁴

The following principles support the NEO and will guide the Commission's assessment and analysis:

³ AEMO's advice was provided to the COAG Energy Council on 14 November 2014 and is published on the COAG Energy Council website.

⁴ Section 7 of the National Electricity Law.

- competition in demand side participation and related services, and competitive neutrality: the framework for a shared market protocol should promote and encourage the development and innovation of services;
- innovation of demand side participation (DSP) and related services: the framework should seek to ensure that innovation in the market is not stifled;
- consumer protection: the framework should have regard to appropriate consumer protections; and
- proportionality: the framework should provide a level of regulation that is proportional to the market's and consumers' requirements.

1.3 Scope

The Commission has identified the following key issues that will need to be addressed in its advice to the COAG Energy Council and an associated draft rule change request:

- The Commission will need to recommend governance arrangements for developing and maintaining the shared market protocol. This may include the development of an objective or principles to guide decision making.
- The shared market protocol will need to be defined in the NER and linked as necessary to the minimum specification (which is being considered as a part of the competition in metering rule change process).
- The roles and responsibilities of parties with regard to using the shared market protocol will also need to be examined and recommendations made to the COAG Energy Council.
- The Commission will need to consider transitional arrangements regarding the relationship between the shared market protocol and the existing B2B arrangements.

To assist in developing a shared market protocol, the COAG Energy Council requested AEMO to prepare advice by February 2015 on the technical requirements for a shared market protocol. The Commission will consider this advice once it is provided.

This advice on the implementation of the shared market protocol is a recommendation to the COAG Energy Council that will include a draft rule change request.

Consequently, it is not necessary to determine all of the technical issues relevant to implementing a shared market protocol. These will be considered further during any subsequent rule change process and in the development of the procedures managed by the relevant governing entity for the shared market protocol.

1.4 Timelines

Table 1.1 Key milestones

Key milestones	Date
Consultation paper - publication	18 December 2014
Consultation paper - close of consultation	12 February 2015
Public forum or stakeholder workshop	March 2015
Draft implementation advice - publication	23 April 2015
Draft implementation advice - close of consultation	21 May 2015
Final implementation advice to COAG Energy Council	2 July 2015

1.5 Lodging submissions

Written submissions from stakeholders and interested parties in response to this consultation paper must be lodged with the AEMC no later than 5pm, Thursday 12 February 2015. Submissions should refer to AEMC project number “EMO0029” and be sent electronically through the AEMC’s online lodgement facility at www.aemc.gov.au.

All submissions received will be published on the AEMC’s website, unless specified to be a confidential submission. While the AEMC will have full regard to all submissions lodged within the specified timeframe, late submissions may not be afforded the same level of consideration.

2 Background

2.1 Recommendations of the open access review

In its open access advice, the Commission defined a new 'gatekeeper' role to manage access to the new services that will be provided by advanced metering infrastructure. As part of the competition in metering rule change process, the Commission is considering what the obligations and functions of the gatekeeper are and how they will be assigned between the metering coordinator and the metering provider.⁵

It also recommended that a shared market protocol be adopted. This shared market protocol would define the format of the communications between the gatekeeper and the parties wishing to access the services from the advanced metering infrastructure.

The Commission considered that any shared market protocol should be services based, rather than providing access directly to the functions in the meter. This is because the parties that seek access to the advanced metering infrastructure are primarily interested in the services that can be provided. Also, specifying the services to be provided, rather than the actual functionality, gives greater flexibility to metering service providers and is likely to promote innovation.

The open access advice also recommended that the gatekeeper would be required to communicate via the shared market protocol when requested by another party. This would improve the level of interoperability of the access arrangements for advanced metering services and reduce barriers to entry. However, parties should be free to agree to other market communication methods so that any potential limitations of the shared market protocol would not limit innovation.

In order to facilitate an expedited development of the shared market protocol, the Commission recommended that the shared market protocol should be established by extending the existing B2B arrangements.

2.2 B2B and the Information Exchange Committee

Under the current arrangements, communications between retailers, market customers and distribution network service providers (DNSPs) related to electricity supply to end users occur through the B2B e-hub, which is an electronic information exchange platform provided by and operated by AEMO.⁶

The operation of the B2B e-hub is managed through B2B procedures, which include requirements for the content, format, delivery and timing for B2B communications, as well as data inputs and outputs.⁷

⁵ Further information on the competition in metering rule change is available on the AEMC website.

⁶ Clause 7.2A.1 of the NER.

⁷ Clause 7.2A.4 of the NER.

While parties are bound to use the B2B e-hub for their B2B communications, they are able to negotiate to communicate with other parties outside of the specific requirements in the B2B procedures.⁸

Unlike other procedures provided for in Chapter 7 of the NER that are developed and maintained by AEMO, the B2B procedures are governed by the Information Exchange Committee (IEC). The IEC consists of three DNSPs, three retailer or market customer members and two independent members that are elected to the position.⁹

A change to the B2B procedures can be proposed by AEMO, retailers, market customers or DNSPs. The IEC is responsible for consulting on and making recommendations on a proposal to AEMO, with decisions being made through voting within the IEC membership.¹⁰ AEMO is bound by the recommendation of the IEC unless it concludes that the IEC has failed to consider the B2B objective or B2B principles, has not followed the rules consultation procedures, or that the recommendation would conflict with the Market Settlement and Transfer Solutions (MSATS) procedures.¹¹

Industry, through the IEC, was given the governance role for the B2B procedures as it was considered to be the best placed to determine the most efficient decisions on the means of B2B communications. IEC members have a commercial incentive to ensure the benefits of B2B communications outweigh the costs.

2.3 Governance of retail market procedures rule change

On 20 June 2013, AEMO submitted a rule change request to the AEMC that would make AEMO the governing body for the B2B procedures by introducing a single governance framework for the making of retail market procedures under Chapter 7 of the NER.¹² Under the proposal, the IEC would have a continued role of providing advice on matters related to the B2B procedures.

AEMO submitted this rule change because it considered that having different processes for different procedures under Chapter 7 of the NER was inefficient. In its view, the current arrangements for B2B were not suited to rapid change, which might be necessary for a rapidly evolving market. AEMO was also concerned that there may be a conflict of interest for its board, where it is obliged to make a B2B procedure at the direction of the IEC.

In July 2014 the Commission decided to not make a rule that would amend the governance framework for the development and administration of B2B procedures. It was not satisfied that the proposal would better promote the NEO than the current

⁸ Clause 7.2A.4(k) of the NER.

⁹ Clause 7.2A.2 of the NER.

¹⁰ Clause 8 of the IEC Operating Manual, available on the AEMO website.

¹¹ Clause 7.2A.3(k) of the NER.

¹² The rule change proposal is available on the AEMC website.

arrangements, or that changes were warranted at the time. The Commission considered that the IEC members have a strong incentive to make efficient decisions, as they would primarily be the ones to bear the costs of implementing changes to the B2B procedures.

The Commission also considered that it might be premature to amend the NER in anticipation of future market developments and wished to avoid making piecemeal amendments. Changes to Chapter 7 of the NER, for example through the competition in metering rule change, might warrant changes to the B2B framework at a later date.¹³

Some of these issues may be revisited in this advice as implementing a shared market protocol will involve an assessment of the appropriate governance framework for a shared market protocol.

¹³ AEMC 2014, Governance of retail market procedures, rule determination, 31 July 2014, p8.

3 Governance

The most significant question to be explored through this advice will be the governance arrangements for the shared market protocol. However, these considerations will be influenced by whether the shared market protocol is an expansion of the existing B2B arrangements. If the B2B arrangements are expanded, governance could involve the existing IEC or an expanded or amended IEC. Alternatively, if the shared market protocol is separate from the B2B arrangements, a broader range of governance options may be considered. If the shared market protocol and B2B are separate, the Commission may need to consider transitional arrangements for the existing B2B e-hub (see Chapter 6).

This chapter discusses the main governance options and whether an objective or set of principles should be developed to guide the decision maker.

3.1 Governance options

The Commission is currently considering two governance models for the shared market protocol: decision-making through an industry group; or decision making by AEMO.

3.1.1 Industry led decision-making

This option involves governance of the shared market protocol through the current IEC, an expanded or amended IEC, or a new industry body under the NER.

The advantage of an industry body is that industry participants are well placed to understand the costs and benefits of the various technical and economic decisions necessary for developing and maintaining the market protocol. In addition, the same participants are also bearing the associated investment and operating costs of their decisions.

However, having an industry body governing the shared market protocol introduces a number of significant governance challenges regarding membership and voting that would need to be resolved.

The current membership of the IEC does not represent the full range of parties that may use the shared market protocol, such as metering providers, metering data providers and third party energy service providers.

Expanding the membership of the IEC, or creating a new industry body, would make the membership of the decision maker more reflective of the parties that use the shared market protocol. However, it could be challenging to allocate voting rights to the members in a way that allows market wide benefits from decisions to be captured. For example, there is a risk that majority voting allows decisions to be made that do not capture the full benefits for non-members, such as consumers, or minority voters.

There is also a risk that incumbent users of the shared market protocol make decisions that inadvertently create barriers to entry for new participants.

As the composition of users of the shared market protocol is likely to change over time, there may also be a need to build flexibility into the governance arrangements to allow the membership to change over time. It is likely to be very challenging to address these issues.

3.1.2 AEMO decision-making

This option involves AEMO making decisions about the operation and administration of the shared market protocol. While this does not involve direct decision making by the stakeholders using the shared market protocol, it could be carried out in consultation with stakeholders. This could be either in accordance with the rules consultation procedures or an alternative consultation process.

There may be benefits in having AEMO responsible for governance of the shared market protocol. Having AEMO as the decision-maker would avoid some of the concerns noted above regarding membership and voting arrangements. AEMO could be required to consult with any stakeholder that is interested in a decision on the shared market protocol. AEMO would then make decisions having regard to the NEO and any additional principles (discussed below).

This option would also avoid the need to build flexibility into the governance arrangements, as AEMO would consult with the stakeholders that are relevant at any particular time. The provision of advanced metering services may evolve significantly over the coming years and the decision maker will need to accommodate the changing requirements.

Box 3.1 Consultation questions: governance

What are the advantages and disadvantages of the different governance models?

Could the challenges around membership and voting for an industry led model be addressed? If so, how?

Are there any other issues or factors relevant to considering an appropriate governance model?

Are there any other governance models that could be appropriate for the shared market protocol?

3.2 An objective and principles for decision-making

This advice will include whether it is necessary to develop a shared market protocol objective and/or principles to provide guidance to the decision maker. These objectives or principles would need to be consistent with the NEO.

Currently, IEC members are required to have regard to the B2B objective and principles when making decisions about B2B procedures.¹⁴ The B2B objective states that "the benefits from B2B communications to local retailers, market customers and distribution network service providers as a whole should outweigh the detriments to local retailers, market customers and distribution network service providers as a whole". The B2B principles are that the procedures should:

- provide a uniform approach to B2B communications in participating jurisdictions in which there are no franchise customers;
- detail operational and procedural matters and technical requirements that result in efficient, effective and reliable B2B communications;
- avoid unreasonable discrimination between local retailers, market customers and distribution network service providers; and
- protect the confidentiality of commercially sensitive information.

The Commission is not suggesting that these be duplicated for the shared market protocol, but that they may provide a useful reference point. The B2B principles would not be appropriate as they only refer to benefits to the listed market participants, and not the broader range of users of the shared market protocol or consumers. Also, as discussed above, the shared market protocol will have different technical requirements and users to the B2B e-hub.

Other procedures that are governed by AEMO, such as MSATS procedures, do not have an objective or principles. However, AEMO is required to have regard to the NEO in carrying out its functions.¹⁵

Box 3.2 Consultation questions: objectives and principles

Should implementation of a shared market protocol include the development of an objective or principles for governance?

If yes, what objectives or principles should be included?

If the governing body is AEMO, should there be any objectives or principles in addition to the NEO?

¹⁴ The B2B objective and principles are defined in Chapter 10 of the NER and B2B arrangements are described in clause 7.2A of the NER.

¹⁵ Section 49(3) of the National Electricity Law.

4 Interactions with the minimum specification

This advice will include how the shared market protocol will interact (if at all) with the minimum specification for advanced metering infrastructure. As discussed above, this is being considered as a part of the competition in metering rule change process.

The parties using the shared market protocol may wish to have access to services or performance standards that are beyond the minimum specification. Therefore, the shared market protocol may need to provide for that wider range of services and performance standards. While it might not be necessary for it to provide for the 'maximum' market expectations possible, to allow it to meet the needs of most parties it would be beneficial for it to effectively manage most common transactions.

As discussed above, the Commission is still finalising the competition in metering rule change process and has not yet considered what will be included in the minimum specification. Therefore, at this stage the Commission is seeking stakeholder views on how both mandatory and non-mandatory services could potentially be treated in the shared market protocol.

Box 4.1 Consultation questions: minimum specification

Should the shared market protocol be required to provide for (as a minimum) the services that are listed in the minimum specification?

Should the shared market protocol also include other common services that are not mandatory under the minimum specification?

5 Roles and responsibilities

This advice will include any roles and responsibilities of parties using the shared market protocol that should be included in the NER.

As described in section 2.1 above, the open access review proposed that the shared market protocol would not be mandatory for parties to use. Parties would be free to use an alternative communication method through negotiation. However, the Commission did recommend that the metering coordinator, as the gatekeeper, would be required to offer its services through the shared market protocol. This advice will need to include the nature of any obligation on the metering coordinator or metering provider to use the shared market protocol.

Currently, local retailers, market customers and DNSPs must use the B2B e-hub for B2B communications,¹⁶ unless the parties agree to terms and conditions outside of the B2B procedures.¹⁷ Metering providers and metering data providers are also required to comply with the B2B procedures.¹⁸ Access to the B2B e-hub is managed by AEMO providing the users with a participant ID, which they use to access the B2B e-hub.

As discussed above, a key difference between the existing B2B e-hub and the shared market protocol will be the range of parties that use it. Currently there is a defined set of users for the B2B e-hub, with all users being registered participants or otherwise authorised by AEMO. As the market for advanced metering services develops, third party energy service providers that have no other obligations within the electricity market may wish to use the shared market protocol.

This advice will include whether some form of authorisation or accreditation by AEMO is necessary to protect against the risks involved in third parties using the shared market protocol and whether these requirements should be specified in the NER.

Some of these risks may be addressed through the competition in metering rule change process. A third party may have a contractual relationship with the metering coordinator and have completed an authorisation process to access the advanced metering services. This may mean that further requirements may be unnecessary. Alternatively, it might be appropriate that AEMO apply some basic or key requirements, such as the use of particular software or the use of passwords, to allow access to the shared market protocol.

¹⁶ Clause 7.2A.1 of the NER.

¹⁷ Clause 7.2A.4(k) of the NER.

¹⁸ Clause 7.2A.4(i) of the NER.

Box 5.1**Consultation questions: roles and responsibilities**

Is it appropriate that the metering coordinator be required to offer its services through the shared market protocol, unless otherwise agreed?

Are there any risks in allowing third parties to access a shared market protocol platform? If so, would it be necessary to develop a separate authorisation process for users of the shared market protocol? Is AEMO the appropriate body to develop these requirements?

6 Transition from B2B to the shared market protocol

If the Commission does not recommend expanding the existing B2B arrangements to accommodate the shared market protocol, this advice may need to include transitional arrangements for the B2B e-hub.

Currently the B2B e-hub provides communications between various registered participants including the retailers and distributors. In the future many of these services will be provided by, or enhanced by, the deployment of advanced metering infrastructure. Therefore, these services are likely to migrate from the B2B e-hub to the shared market protocol.

The Commission also understands from discussions with AEMO that the performance of the current B2B e-hub is not sufficient to be able to support the near instantaneous communications required to provide on demand access to services. This will mean that the hardware platform for the shared market protocol will be likely to be separate to the existing B2B e-hub, at least for some of the services.

The Commission will consider the transition from the existing B2B e-hub to the platform for the shared market protocol. It will also consider whether there is an ongoing need for the current B2B e-hub to be maintained and, if so, what transitional arrangements would be required. This issue is being considered by AEMO and may form part of its advice on the shared market protocol that will be provided to the COAG Energy Council in February 2015.

The Commission will also consider the timing and other implications should the shared market protocol not be operational on the same day that the competition in metering rule change takes effect. As discussed above, the B2B e-hub would not be able to process 'instant' services, but could theoretically manage the other 'on demand' and 'scheduled' services.

In Victoria, advanced metering services have been used without a common or shared market protocol. Instead, the market participants developed their own communication methods, including some using the B2B e-hub, to deliver some remote services. This indicates that while a shared market protocol will facilitate market transactions in the NEM, it may not need to be fully operational on the commencement date of any final rule arising from the competition in metering rule change request.

Box 6.1 Consultation questions

Is there a need for the current B2B e-hub to be maintained beyond the implementation of the shared market protocol? What factors would need to be considered when making this assessment?

Could all the services that are currently provided through the current B2B e-hub be provided via the shared market protocol?

Would there be an advantage in having a transition period during which both the B2B e-hub and the shared market protocol operate? How long should such a period be? Would the costs of operating both systems for this period be justified?

Are there any significant implications should the shared market protocol not be operational on the same day that any changes from the expanding competition in metering and related services rule change take effect?