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12 August 2011

General Manager
Network Operations and Development Branch
Australian Energy Regulator
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Sent by email: aerinquiry@aer.gov.au

Dear Sir/Madam

Submission on network and retail exemption guidelines

Ausgrid welcomes the opportunity to respond to the AER regarding the AER's Electricity Network Service Provider Registration Exemption Guideline and Consultation Paper.

Ausgrid is pleased to see the AER taking a proactive approach to the issue of network service provider exemptions. Ausgrid understands that the existing guidelines have not been reviewed since they were inherited from NECA in the transfer of functions when the AER was formed in 2005. The opportunity now presented to review these in conjunction with the proposed Exempt Selling Guideline is timely. In addition to the opportunity to ensure a consistent approach between network and retail exemptions, there are many issues in relation to network exemptions that to some extent have never been adequately addressed. Ausgrid is therefore hopeful that these issues can be identified and rectified as part of this process.

Ausgrid's primary concerns (from the point of view of an LNSP) relate to the regulation of the physical aspects of the connection and operation of embedded networks, whereas the exemptions framework appears to Ausgrid to be focused primarily on the retail aspects. Ausgrid is concerned that insufficient attention has been given to physical and operational matters such as metering and electrical safety, and adequately identifying roles and responsibilities for aspects of embedded networks.

For a number of these issues, the core of the problem lies in the NERs themselves, or in jurisdictional electricity legislation, which were not drafted with embedded networks in mind and do not adequately cater for them. Ausgrid has raised these issues with appropriate regulatory bodies (such as the AEMC and AEMO) in the past, and some of the issues have been acknowledged but not yet resolved.

To that extent, appropriate resolution of these issues lies not with the AER through its guidelines or exemption conditions, but elsewhere (such as through Rule changes). Exemption conditions are a very limited form of regulation. There are limited legal sanctions available for non-compliance, and the AER has limited resources and expertise to adequately monitor and enforce matters of a technical nature.

Ausgrid requests that the AER to be mindful of the extent to which there are such regulatory gaps, and hence the extent to which its proposed exemption conditions may or may not work to achieve the desired outcome. Ausgrid also seeks the AER's co-operation in liaising with other regulatory bodies for this purpose (such as in seeking Rule changes).

Until these issues are resolved, there will continue to be regulatory uncertainty in the market. Furthermore, there will continue to be pressure on LNSPs (such as Ausgrid) to take on responsibility for matters within embedded networks (such as child metering and associated record keeping and its subsequent publication to the market) which are not in fact its responsibility, and for which there is not adequate provision for cost recovery.

The attached consultation response sets out Ausgrid's detailed comments on the draft guideline and consultation paper.

Please contact Mr Keith Yates on (02) 4951 9359 if you require any further information or would like to discuss our response.

Yours sincerely

Peter Birk
A/Executive General Manager-
System Planning & Regulation

Attachment: Ausgrid Submission to AER on Network and Retail Exemption Guidelines

Submission to AER on Network and Retail Exemption Guidelines

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Contents

1 Introduction

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Ausgrid's primary concerns (from the point of view of an LNSP) relate to the regulation of the physical aspects of the connection and operation of embedded networks, whereas the exemptions framework appears to Ausgrid to be focused primarily on the retail aspects. Ausgrid is concerned that insufficient attention has been given to physical and operational matters such as metering and electrical safety, and adequately identifying roles and responsibilities for these matters.

For a number of these issues, the core of the problem lies in the NERs themselves, or in jurisdictional electricity legislation, which were not drafted with embedded networks in mind and do not adequately cater for them. Ausgrid has raised these issues with appropriate regulatory bodies (such as the AEMC and AEMO) in the past, and some of the issues have been acknowledged but not yet resolved.

To that extent, appropriate resolution of these issues lies not with the AER through its guidelines or exemption conditions, but elsewhere (such as through Rule changes). Exemption conditions are a very limited form of regulation. There are limited legal sanctions available for non-compliance, and the AER has limited resources and expertise to adequately monitor and enforce matters of a technical nature.

What Ausgrid does ask of the AER is for the AER to be mindful of the extent to which there are such regulatory gaps, and hence the extent to which its proposed exemption conditions may or may not work to achieve the desired outcome. Ausgrid also seeks the AER's co-operation in liaising with other regulatory bodies for this purpose (such as in seeking Rule changes).

Until these issues are resolved, there will continue to be regulatory uncertainty in the market. Furthermore, there will continue to be pressure on Ausgrid (as an LNSP) to take on responsibility for matters within embedded networks (such as child metering) which are not in fact its responsibility, and for which there is not adequate provision for cost recovery.

2 Key areas of concern

Ausgrid's key areas of concern relate to metering and electrical safety. These are discussed in paragraphs 3 and 4 below respectively. Other issues are addressed in paragraph 5.

In paragraph 6 we provide our response to each of the specific questions for consultation.

3 Metering

3.1 AER Guidelines: proposed conditions of exemption

The AER has specified a number of conditions of exemption in relation to metering, in Part B clauses 5, 6 and 8. We set out specific comments on each of these conditions in paragraph 3.20

below. However, the commentary in the following paragraphs is first provided in order to understand the context for Ausgrid's comments.

3.2 Apparent assumptions

There appears to be a number of incorrect assumptions in these proposed conditions, particularly regarding the applicability of the National Electricity Rules (NERs), and AEMO's and network service providers' roles and responsibility under them, in the context of embedded networks.

Before discussing those matters in detail, we first outline how metering arrangements in embedded networks currently work in practice without the appropriate regulation.

3.3 In practice: NEM metering and non-NEM metering

In practice, it is necessary to distinguish between metering at customer connection points within embedded networks:

- at which an exempt onseller sells electricity to a customer (non-NEM metering); and
- at which a retailer (who participates in the wholesale market) sells electricity to a customer (NEM metering).

Say, for example, that a retailer ("RetailCo 1") participates in the wholesale market with respect to the "gateway" to the embedded network (i.e. the connection point between the LNSP's network and the embedded network), and sells electricity to the owners corporation at that point under a retail contract (with this meter measuring the entire consumption within the embedded network). Say that the owners corporation (the "Exempt Onseller", who is also the embedded network operator) on sells electricity to all customers connected within that network (say there are 10 such customers).

In this situation, the metering installation at the gateway would be regarded as a National Electricity Market (NEM) metering installation, as a "parent" metering installation. It would need to comply with requirements under the NERs. Among other things, it would need a NMI, it would need to be registered with MSATS, there would need to be a "responsible person" for it, it would need to be provided, installed and maintained by a registered "metering provider", and a "metering data provider" would need to be appointed. Ausgrid (as the LNSP of the network to which the parent metering installation is connected) would be the LNSP for this metering installation in MSATS and as a part of issuing the parent NMI would create and register with AEMO the embedded network identifier code. This code is what links the parent and child NMIs together and allows for market settlement.

The other metering installations, at the 10 end-use customers' premises, would not be regarded as NEM metering installations and would not be governed by the NERs. They would not have NMIs or be registered with MSATS (unless they were previously registered, in which case their NMI status might simply be changed to "extinct"). However, upon the set up of the parent metering installation, Ausgrid would typically issue a "block" of NMIs to the FRMP of the parent (equal to the number of consumer connection points). These would only be allocated to each consumer connection point and become active once a consumer within the embedded network enters into a retail contract with another retailer. The FRMP of the parent NMI will normally set up these NMIs in MSATS.

Say then that subsequently, 2 of these customers enter into retail contracts directly with another retailer (say both of them choose to take their electricity from "RetailCo 2"). In this situation, the metering installations at those customer connection points would then themselves be regarded as NEM metering installations, and would be subject to the same requirements described above for the parent metering installation.

In this situation, the metering installations at each of these 2 customers' premises would need to be registered with MSATS as "child" metering installations of the parent metering installation. Accordingly, for market settlements purposes, the consumption at the child meter would be attributed to RetailCo 2, and the consumption at the parent meter less the consumption at the child meters would be attributed to RetailCo 1.

The meters for the remaining 8 customers who continued to take their supply from the owners' corporation (as Exempt Onseller) would still not be recognised by the market. From the point of view of market settlements, their consumption is attributable to RetailCo 1 (even though they do not buy from RetailCo 1, as they buy from the Exempt Onseller instead).

3.4 Responsibility for metering: not LNSP's responsibility

Ausgrid, as an LNSP, does not consider that *any* metering within the embedded network (beyond the parent meter) is its responsibility, whether that metering is NEM metering or non-NEM metering. Under the NERs, Ausgrid is only responsible for metering installations *directly* connected to its network. We explain our reasons for this further below.

However, various publications and guidelines of regulatory bodies have in the past stated or suggested that LNSPs are in fact responsible for NEM metering within embedded networks. Ausgrid does not believe that these positions are supported by the NERs (and Ausgrid has raised these issues on a number of occasions in the past). For these reasons, Ausgrid is particularly concerned at the AER's draft conditions referring generally to "applicable AEMO requirements" rather than, for example, to requirements of AEMO in accordance with the NERs. We also discuss this further below.

3.5 Regulatory gap for NEM metering in embedded networks

A significant problem in this regard is that the NERs, while apparently intending to capture all NEM metering, do not properly capture and allocate responsibility for NEM metering within embedded networks at all. This is because, in brief, the provisions regarding the Responsible Person (and on which many of the other provisions rely) assume that the relevant metering installation will be directly connected to an LNSP's network. However, the metering installations within the embedded network are *not* directly connected to an LNSP's network; they are instead connected to the embedded network. An embedded network owner (as an exempt network) *is not, and cannot be,* an LNSP under the NERs. This is because the relevant definitions refer to registered, rather than exempt, persons.

This regulatory gap therefore needs to be fixed, as a matter of priority. In the meantime, the AER should be aware of the hole when drafting and finalising its conditions.

3.6 NEM metering under Chapter 7 of the National Electricity Rules

Chapter 7 of the NERs is largely concerned with NEM metering. (It also covers some other metering (such as non-market generators); we discuss this aspect further below.)

Clause 7.1.2(a) of the NERs provides as follows:

> "(a) Before participating in the *market* in respect of a *connection point*, a *Market Participant* must ensure that:
>
> (1) the *connection point* has a *metering installation* and that the *metering installation* is registered with *AEMO*;
>
> (2) either:
>
> (i) it has become the *responsible person* under clause 7.2.2 and has advised the *Local Network Service Provider*; or
>
> (ii) it has sought an offer and, if accepted, entered into an agreement under clause 7.2.3; and
>
> (3) prior to registration, a *NMI* has been obtained by the *responsible person* for that *metering installation*."

Much of Chapter 7 therefore focuses on NEM participation requirements. The appointment of a Responsible Person and the issue of a NMI are of crucial importance to these requirements.

If a retailer supplies electricity to a customer in an embedded network (as in the case of RetailCo 2 in our example above), the retailer (as the FRMP) must comply with this provision.

3.7 Responsible Person under the National Electricity Rules

Clauses 7.2.2 and 7.2.3 of the NERs cover the appointment of the Responsible Person. They effectively provide that:

(a) the LNSP is the Responsible Person for Types 5-7 metering installations; and

(b) either the FRMP or the LNSP is the Responsible Person for Types 1-4 metering installations.

Usually in practice, the FRMP is the Responsible Person for Types 1-4 metering installations.

These clauses are in the following terms:

"**7.2.2 Responsibility of the Market Participant**

(a) A *Market Participant* may elect to be the *responsible person* for a *metering installation* that is a type 1, 2, 3 or 4 *metering installation*.

(b) A *Market Participant* is the *responsible person* for a type 1, 2, 3 or 4 *metering installation* if:

(1) the *Market Participant* elects not to request an offer from, or does not accept the offer of, the *Local Network Service Provider* for the provision of a *metering installation* under clause 7.2.3; or

(2) an agreement under clause 7.2.3 is terminated due to a breach by the *Market Participant*.

7.2.3 Responsibility of the Local Network Service Provider

(a) The *Local Network Service Provider* is the *responsible person* for:

(1) a type 1, 2, 3 or 4 *metering installation* connected to, or proposed to be connected to, the *Local Network Service Provider's network* where the *Market Participant* has accepted the *Local Network Service Provider's* offer in accordance with paragraphs (b) and (c); and

(2) a type 5, 6 or 7 *metering installation* connected to, or proposed to be connected to, the *Local Network Service Provider's network* in accordance with paragraphs (d) to (i).

Types 1 - 4 metering installations

(b) A *Market Participant* may request in writing an offer from the *Local Network Service Provider* to act as the *responsible person* where a type 1, 2, 3 or 4 *metering installation* is, or is to be, installed.

(c) If the *Local Network Service Provider* receives a request under paragraph (b), the *Local Network Service Provider* must:

(1) offer to act as the *responsible person* in respect of that *metering installation*;

(2) provide the *Market Participant* with the name of the *Metering Provider* and the name of the *Metering Data Provider* that would be engaged under clauses 7.2.5(a) and 7.2.5(c1), if requested by the *Market Participant*; and

(3) provide the *Market Participant* with the terms and conditions relating to the offer, no later than 15 *business days* after the *Local Network Service Provider* receives the written request from the *Market Participant*.

Note

This clause is classified as a civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

Types 5 -7 metering installations

(d) The *Local Network Service Provider* may provide a *Market Participant* with a standard set of terms and conditions on which it will agree to act as the *responsible person* for a type 5, 6 or 7 *metering installation*.

(e) Where the *Local Network Service Provider* has not provided the *Market Participant* with the standard set of terms and conditions referred to in paragraph (d), the *Market Participant* must request an offer from the *Local Network Service Provider* to act as the *responsible person* where a type 5, 6 or 7 *metering installation* is, or is to be, installed.

Note

This clause is classified as a civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

(f) The *Local Network Service Provider* must, within 15 *business days* of receipt of the request under paragraph (e), make an offer to a *Market Participant* setting out the terms and conditions on which it will agree to act as the *responsible person*.

(g) The terms and conditions of an offer made under paragraphs (d) or (f) must:

(1) be fair and reasonable; and

(2) not have the effect of unreasonably discriminating between *Market Participants*, or between the customers of a *Market Participant*.

(h) In relation to an offer made under paragraphs (d) or (f), a *Market Participant*:

(1) must accept the offer; or

(2) may dispute the offer in accordance with rule 8.2.

Note

This clause is classified as a civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

(i) If a *Market Participant* accepts the offer in accordance with paragraph (h), the *Local Network Service Provider*:

(1) becomes the *responsible person*; and

(2) must provide *AEMO* with the *NMI* for the *metering installation* within 10 *business days* of entry into a *connection agreement* under clause 5.3.7 with that *Market Participant*."

3.8 Not LNSP's responsibility

It is notable that in both cases (i.e. both types 1-4 and types 5-7 metering) this applies for metering installations **"connected to, or proposed to be connected to, the *Local Network Service Provider's network*"** (see clauses 7.2.3(a) (1) and 7.2.3(a) (2)).

In this regard:

(a) a "Local Network Service Provider" is a *registered* network service provider – see Chapter 10 definitions; i.e.:

"***Local Network Service Provider***

Within a *local area*, a *Network Service Provider* to which that geographical area has been allocated by the authority responsible for administering the *jurisdictional electricity legislation* in the relevant *participating jurisdiction*.

Network Service Provider

A person who engages in the activity of owning, controlling or operating a *transmission or distribution system* and who is registered by *AEMO* as a *Network Service Provider* under Chapter 2."

(b) the definition of "connect" means to form a physical link to or through a transmission or distribution network; i.e.:

"***connect***, ***connected***, ***connection***

To form a physical link to or through a *transmission network* or *distribution network*."

On the basis that "connect" means direct physical connection (rather than an indirect one), the (registered) LNSP of the parent NMI is therefore not the Responsible Person for metering installations in embedded networks, as these are not connected to the LNSP's network.

Although the definition of "connect" refers to a physical link "through" a network, as well as "to" a network, it cannot have been the intention to cover indirect connections. If this were the case, no particular LNSP would be responsible for any particular connection point, as they are all interconnected.

Furthermore, from a policy perspective, it seems unlikely that an LNSP should have responsibility for metering at connection points not directly physically connected to its network, as the LNSP does not own or control the infrastructure of embedded networks and hence would require the co-operation of the embedded network owner or operator in order to discharge any such duties. In addition, how would an LNSP ensure the accuracy and integrity of the metering installation which is connected to privately owned assets? This would require NEM approved security sealing devices to be installed on ALL upstream electrical access points (e.g. pillars, switchboards, links etc) from the child metering installation.

3.9 Not anyone else's responsibility either

The issue for NEM connection points within embedded networks is that the NERs do not clearly allocate responsibility to anyone at all. The NERs do not seem to have been drafted with the possibility that there might be NEM connection points within an embedded network in mind, despite a clear intention to regulate all NEM connection points.

3.9.1 Types 5-7 metering installations

There is no provision in the NERs for any person other than the LNSP to become the Responsible Person for Types 5-7 metering installations.

The only clause dealing with who is the Responsible Person for these metering installations is clause 7.2.3, which only covers metering installations "connected to, or proposed to be connected to, the *Local Network Service Provider's network*".

Due to the definition of "Network Service Provider" referring to a person who is registered as such by AEMO under the NERs, there is no scope for an embedded network operator (who is exempt from the requirement to register, rather than be registered) to be an LNSP. The AER would have no power to deem an exempt person to be an LNSP. (However, in practice, the way NMIs are currently set up in MSATS is that the LNSP for a child is the "ENO" (embedded network operator).)

Since the Responsible Person is a creature of statute, no other person can technically be the Responsible Person (and hence have the Responsible Person's statutory responsibilities) as there is no statutory provision for it. Similarly, the AER has no power to deem a person to be the Responsible Person, if they are not one under the NERs.

While it may be open to the AER to require exempt network owners or operators to take on similar roles and responsibilities as conditions of their exemption, this is a very different legal mechanism and has significant limitations compared to the way in which this is regulated under the NERs. The consequences of taking such an approach should be considered in detail were the AER to be

minded to do this. Furthermore, the AER's powers to impose conditions only extend to the exempt person, not another person such as the retailer within an embedded network.

3.9.2 Types 1-4 metering installations

For Types 1-4 metering installations, on the other hand, the FRMP for a connection point within an embedded network (if there is one) *can* elect to be the Responsible Person (clause 7.2.2(a)).

If the FRMP does not so elect, however, the LNSP of the parent NMI is still not the Responsible Person, for the reasons indicated above.

3.10 Unintended result

Therefore, where a retailer (who participates in the wholesale market) supplies electricity to customers within an embedded network (where the embedded network owner is not registered), technically the retailer (as FRMP for the child connection point) would be obliged to comply with the obligations under clause 7.1.2(a) to ensure that there is a Responsible Person, and yet there is no adequate provision for someone to become the Responsible Person (unless, in the case of types 1-4 metering installations, the FRMP of the child agrees to take on the role). The LNSP of the parent metering installation is not the Responsible Person for the child.

Furthermore, even clause 7.3.1A (a) of the NERs, which provides that:

> "Each *connection point* must have a *metering installation*"

and which was apparently intended to have broader impact than market connection points (applying, for example, to non-market generator connection points, although not to non-registered generator connection points), would not even technically apply here, as the definition of "connection point" is as follows:

> "The agreed point of *supply* established between *Network Service Provider*(s) and another *Registered Participant*, *Non-Registered Customer* or *franchise customer*."

Given that a Network Service Provider is a *registered* NSP, these provisions do not technically extend to *any* connection points within embedded networks (whether they are NEM or non-NEM metering installations).

This would appear to be a bizarre and unintended result.

3.11 Allocation of NMIs

As indicated in paragraph 3.6 above, clause 7.1.2(a) of the NERs requires that before participating in the wholesale market in respect of a connection point, a Market Participant must ensure that there is a Responsible Person, the metering installation is registered with AEMO, and that prior to registration of the metering installation, the Responsible Person has obtained a NMI for that metering installation.

Clause 7.3.1(d), (e) and (f) of the NERs provide as follows:

> "(d) The *responsible person* for a *metering installation* must apply to the *Local Network Service Provider* for a National Metering Identifier (*NMI*).
>
> (e) The *Local Network Service Provider* must issue for each *metering installation* a unique *NMI*.
>
> **Note**
>
> This clause is classified as a civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)
>
> (f) The *responsible person* must register the *NMI* with *AEMO* in accordance with procedures from time to time specified by *AEMO*.

Note

This clause is classified as a civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)"

Read in isolation, clause 7.3.1(e) might suggest that the LNSP must issue a NMI for every metering installation (whether or not there is a Responsible Person for that metering installation and indeed whether or not the requirements of Chapter 7 for metering installations apply at all).

However, this cannot have been the intention. Read in context, it is clearly intended to impose an obligation on an LNSP only following a request from the Responsible Person under clause 7.3.1(d) of the NERs. This creates interpretational difficulties when there is no adequate provision for appointment of the Responsible Person.

Furthermore (and perhaps more significantly), clearly "the LNSP" in this context must be the LNSP referred to in clauses 7.2.2 and 7.2.3 (referred to above) – i.e. the LNSP to whose network the metering installation is connected. As with the Responsible Person provisions, it appears that the NERs did not specifically contemplate a situation where the metering installation would be connected to an embedded network, which in turn connects to an LNSP's network. It does not necessarily follow that this reference to "the LNSP" must therefore be interpreted as the network of the LNSP to which the parent metering installation is connected.

Therefore, on its face, it would appear that the LNSP has no obligation to issue NMIs for metering installations that are not connected to its network (but which are instead connected to an embedded network). Furthermore, the obligation to issue NMIs only arises upon request from the Responsible Person.

In the past, Ausgrid (formerly EnergyAustralia) has traditionally co-operated with requests to issue NMIs within embedded networks to facilitate customers within these networks being able to choose their retailer. Ausgrid has always supported full retail competition and the implementation of systems to facilitate it, despite the uncertainty in the NERs, and in practice it has not been a significant task (compared with taking on the role of Responsible Person, which would be). However, this has been done in the absence of an appropriate regulatory framework. As with the Responsible Person provisions, this is a matter that Ausgrid submits should be properly considered at a policy level and clarified through appropriate Rule changes.

Any such Rule changes should address not only the obligation to issue NMIs (which might be done through issuing a "block" of NMIs), but also the obligation to allocate them to individual metering installations, and to update MSATS with the details.

3.12 Non-NEM metering in embedded networks

As indicated in paragraph 3.6 above, Chapter 7 of the NERs is largely concerned with NEM metering.

Some of the provisions were also intended to extend to some non-NEM metering, such as market generator connections (in this regard see paragraph 3.13 below).

However, none of the provisions extend to *all* metering. For example, as indicated in paragraph 3.10 above, while there is a general statement in clause 7.3.1A (a) of the NERs that "Each *connection point* must have a *metering installation*", the definition of connection point effectively means that this does not extend to customer connection points within an embedded network.

Also due to the definition of "connection point", these requirements would not extend to non-registered (as opposed to registered but non-market) generator connection points, even if connected to an LNSP's network.

Therefore, while clause 7.3.1(a) contains general requirements for "metering installations" (defined broadly), the apparent intention is for this clause to be read in the context of the preceding clause 7.3.1A (providing that "Each *connection point* must have a *metering installation*"). Therefore the

technical obligations in clause 7.3.1(a) are only intended to apply to those metering installations covered by clause 7.3.1A.

This conclusion is reinforced by, for example, clause 7.3.1(a) (2), which requires that a metering installation must be accurate in accordance with clause 7.3.4. Clause 7.3.4(a) in turn provides that:

> "(a) The type of *metering installation* and the accuracy requirements for a *metering installation* which must be installed in respect of each *connection point* are to be determined in accordance with schedule 7.2."

As this provision again refers to metering installations in respect of "each *connection point*", the definition of "connection point" is again relevant in determining the coverage of these provisions.

As a related issue, the obligations under clause 7.3.1(a) and schedule 7.2 are stated in the passive tense (i.e. "a *metering installation* …. must …"), so it is not clear on their face that who is responsible for complying with the relevant requirements. Read in context, however, this would appear to be the Responsible Person's responsibility (see, for example, clause 7.2.5(d), which states that the Responsible Person must ensure certain things happen in relation to each of its *metering installations*). This then reinforces the conclusion that these general provisions were not intended to apply in a context in which there is no Responsible Person.

Accordingly, it would appear that neither the general requirement that each connection point have a metering installation, nor the technical requirements for metering installations (set out in clause 7.3.1(a) and schedule 7.2), apply to customer connection points within an embedded network (whether NEM or non-NEM). The intention, however, appears to be to cover these NEM connection points (but not the non-NEM connection points.

3.13 Generator connections

3.13.1 Non-market generators under the NERs

As indicated above, the focus of Chapter 7 is on market metering, and hence it includes market generators. There are also some provisions that extend to non-market generators. It does not extend to non-registered generators (see definition of "connection point", referred to in paragraphs 3.10 and 3.12 above).

In relation to non-market generators, clause 7.3.1(i) provides as follows:

> "(i) In addition to the requirements in paragraphs (a) to (g), a *metering installation* for a *non-market generating unit* must: …"

It then sets out various technical requirements.

The wording assumes that clause 7.3.1(a) to (g) already apply to non-market generators. However, a number of these provisions assume that there will be a Responsible Person (see, e.g., clause 7.3.1(d), (f) and (g)). As there will be no FRMP for non-market generators (as technically no-one participates in the market in respect of that connection point, as the Local Retailer instead purchases all of the electricity under a PPA outside the wholesale market), clauses 7.2.2 and 7.2.3 (regarding the appointment of the Responsible Person) do not work as well as they might in this context as they assume that there will be both an FRMP and an LNSP.

3.13.2 Responsibility for generator connections generally

For generator connections generally (whether market, non-market or non-registered), Ausgrid considers that it (as an LNSP) has no responsibility for metering of generators that are connected to embedded networks. This is for similar reasons to those outlined above in relation to customers connected to an embedded network.

For some large generator connections (such as a wind farm connected to a transmission or distribution network), the owner of the generator might choose to construct and own its own connection line, connecting the generator to the LNSP's network. Where the entire facility is owned by the generator, it is typically regarded as the one facility from the point of view of a Connection

Agreement under Chapter 5 of the NERs. As the entire facility (generator plus connection line) is directly connected to the LNSP's network, the usual rules regarding connection and metering would apply (subject to the comment in paragraph 3.13.1 above regarding non-market metering).

However, if the connection line is separately owned, and hence regarded as an embedded network, with the LNSP having no contractual relationship with the owner of the generator, the LNSP has no responsibility for metering at this point.

3.14 AEMO Embedded Network Guideline

AEMO's current Embedded Network Guideline contains a number of statements that are not, in Ausgrid's opinion, supported by the NERs (as set out in the analysis above).

For example:

(a) In paragraph 4.1 it states that "… the LNSP will have the same role and responsibility for managing NMIs in embedded networks that are connected to it as it does within its own network".

(b) In paragraph 4.2 it states that:

where a consumer in an embedded network accepts an offer from a registered retailer, the new retailer will need to request that the LNSP (through an MSATS change request) create a child NMI (where no NMI exists) or to activate the NMI that has not been energised;

where a consumer in an embedded network transfers to the embedded network operator as their retailer, the embedded network operator should request that the LNSP submit a change request to change the NMI from "Active" to "Not energised".

In paragraph 4.3 it states that where a consumer in an embedded network has a Registered Participant as its retailer, there must be a Metering Provider and Metering Data Provider under the NERs, which may be the LNSP of the parent.

In paragraph 5.4 it states that "The LNSP of the parent NMI has the key role in entering the change requests into MSATS. MSATS must be updated in an accurate and timely manner."

In paragraph 5.4.4 it states, in relation to Embedded Network Child Consumers, that "The RP [Responsible Person] must be the FRMP or the LNSP in accordance with the Rules …"

In paragraph 6.2 it states that "The responsible person for the child metering installation is also determined in accordance with the Rules".

As indicated above, and contrary to these Guidelines, Ausgrid does not consider that the LNSP of the parent metering installation has these responsibilities in embedded networks.

Ausgrid has made submission to AEMO in the past regarding some of these issues. See, for example the 11 June 2010 submission, http://www.aemo.com.au/registration/0119-0013.pdf.

Ausgrid therefore submits that the AER's proposed exemptions should not refer generally and vaguely to complying with AEMO requirements. Some of these "requirements" may have no status under the NERs. The conditions should instead refer to complying with relevant requirements under the NERs.

3.15 AEMC approach

Ausgrid has also in the past made submissions on some of these issues to the AEMC. See, for example the 1 July 2010 submission, http://www.aemc.gov.au/Media/docs/EnergyAustralia-0c750f05-2580-48ff-a61d-156725a049f5-0.pdf. This submission was in the context of the *National Electricity Amendment (Provision of Metering Data Services and Clarification of Existing Metrology Requirements) Rule 2010*.

Initially, the AEMC determined that it was not necessary to address the issues that we initially raised with respect to the responsible person for wholesale metering points and child NMIs in

embedded networks. However, following our subsequent submission (linked above), the AEMC stated in its Final Rule Determination (at paragraph 12.1) that:

> "The Commission discussed this issue with EnergyAustralia and AEMO. In these discussions, it became apparent that this issue is sufficiently complex and would require further detailed consultation, which is not available in this Rule Change Request. The Commission considers that this issue is outside the scope of this Rule Change Request due to its complexity. The Commission notes that further consultation between AEMO and industry on this complex issue may lead to a future Rule Change Request."

3.16 Previous meeting with AEMC and AEMO

As noted in 3.15 Ausgrid (formerly EnergyAustralia) met with both the AEMC and AEMO on 4 August 2010 to discuss these issues. It was agreed by all parties that there are gaps in the NERs with respect to embedded networks. These matters are yet to be properly addressed.

3.17 Proposed way forward

On the basis of the above analysis, it can be seen that metering arrangements within embedded networks are not the responsibility of the LNSP, and are largely unregulated.

Ausgrid considers that there is an urgent need for a Rule change to clarify responsibility for metering in embedded networks.

Ausgrid submits that this Rule change should (among other things):

(a) clearly extend the operation of Chapter 7 to connection points within embedded networks supplied by registered retailers;

(b) clearly provide for who the Responsible Person should be for these connection points (either the embedded network operator or the retailer);

(c) clarify responsibility for allocation of NMIs within embedded networks and updating of MSATS (and, if the LNSP is to continue to have a role rather than this being an obligation of the embedded network owner, whether that responsibility can be discharged simply by allocating a "block" of NMIs to the embedded network owner or retailer for allocation);

(d) clarify Responsible Person arrangements for non-market generators; and

(e) clarify the intended operation of any of the provisions of Chapter 7 to non-NEM connection points.

Ausgrid submits that metering within embedded networks (beyond the parent metering installation) should not be the responsibility of the LNSP of the parent NMI.

Ausgrid requests that the AER undertakes to recommend having these important issues addressed through Rule changes.

3.18 Cost recovery

If, contrary to Ausgrid's submission, the LNSP is required to take on regulatory responsibility for these things (whether a full Responsible Person role or the more limited role of issuing NMIs), through a Rule change to that effect, there should be adequate provision for cost recovery.

Clause 7.3A (a) of the NERs states the general principle that the FRMP is responsible for costs associated with metering.

Clause 7.3A (f) then states that:

> "Paragraph (a) does not apply to the recovery of costs by a *Local Network Service Provider* that are associated with type 5, 6 or 7 *metering installations*, to the extent that these costs can be recovered by the *Local Network Service Provider* in accordance with a determination made by the *AER*."

The AER, in its distribution determinations, has made an allowance for the costs associated with the LNSP's role under the NERs with respect to types 5-7 metering installations. However, as indicated above, this does not apply to metering installations within embedded networks.

If the LNSP's role under the NERs were to be extended (through a Rule change) to effectively make the LNSP responsible for types 5-7 metering installations within embedded networks (both NEM and non-NEM), this could have significant cost implications. There are many embedded networks across Ausgrid's distribution district which in turn has numerous customers connected. Ausgrid does not own and has never taken responsibility for those meters.

As indicated in Ausgrid's previous AEMC submission, if the LNSP were to take Responsible Person responsibility for these, it would need as a minimum:

(a) conduct a site audit on each metering installation to identify the property number of each meter and site details (e.g. physical address and other required NMI standing data) for registration in MSATS;

(b) incorporate the metering equipment in its meter asset management plan (for meters which have not been included), which could involve additional metering installation testing;

(c) obtain valid test reports for each metering installation that may not be available;

(d) arrange to either test or replace the metering installation if a current valid test is not available;

(e) arrange for the site details to be created in their meter reading systems and arrange for appropriate time frames for regular collection of the meter energy data.

This could lead to significant costs and time delay which are not currently contemplated or allowed for by the AER distribution determination. There could also be costs associated with upgrading mains and switchboards to comply with relevant Australian Standards to allow for the metering installation to be connected. This should be at the cost of the embedded network operator.

Furthermore, if there is no relevant retailer within the embedded network, but only an exempt on seller, there is no FRMP from whom to recover the costs under clause 7.3A(a).

These issues will be relevant considerations in any Rule change.

3.19 Other regulatory instruments

For reasons of time and space this submission does not address issues arising from other regulatory instruments (such as the *Metrology Procedure* and the *Market Operations Rules (NSW Rules for Electricity Metering*) *No. 3 of 2001*, although these will also need to be considered in any resolution of the issues.

3.20 Proposed AER conditions

In light of the above analysis, we now address each of the AER's proposed metering conditions in detail.

3.20.1 Comply with National Measurement Institute requirements and schedule 7.2 of the NER (Part B clause 5(1))

The AER's proposed condition is that:

> "All meters used for the measurement of electrical energy whether delivered to, or exported by, a customer must comply with the requirements of the National Measurement Institute for electricity meters and sub-meters and with the requirements set out in schedule 7.2 of the NER."

This condition appears intended to apply to all meters within embedded networks (both NEM and non-NEM).

Ausgrid submits that:

(a) It should refer to "metering installations" rather than just "meters".

(b) It should refer to requirements under the *National Measurement Act 1960 (Cth)*, rather than the requirements of the National Measurement Institute. In general, Ausgrid considers that the conditions should not refer generally to requirements of various statutory bodies, but should instead refer to requirements under relevant legislation. This is to ensure that the conditions do not inadvertently provide the relevant statutory body with a jurisdiction in relation to the subject matter that it would not otherwise have by law.

(c) It should be stated in the active rather than the passive tense so that it is clear *who* is obliged to do what (bearing in mind that the exempt party is the only person on whom the AER has any jurisdiction to impose any obligations).

(d) To the extent that it is intended to impose an obligation to comply with schedule 7.2 of the NERs where such an obligation would not otherwise exist (such as for non-NEM meters, or NEM meters in circumstances where there is no clear provision for a Responsible Person – see paragraph 3.13 above), it should clearly say so (for example, by saying something along the lines of "as if those requirements were requirements imposed directly on the exempt person in relation to all such metering installations under the NERs"). The AER should also consider how these provisions should apply to the extent that they refer to AEMO or a Responsible Person, in contexts (such as non-NEM metering) where there are no such roles.

(e) To the extent that it is intended to impose an obligation to comply with schedule 7.2 of the NERs where such an obligation would not otherwise exist, the AER should carefully consider whether this should also extend to any other corresponding provisions of the NERs (such as requirement under clause 7.3.1).

3.20.2 Individual metering for all customers (Part B clause 5(2))

The AER's proposed condition is that:

> "All customers must be individually metered except where the AER has determined an unmetered supply is permitted."

Ausgrid agrees with this condition.

3.20.3 Transmission networks: AEMO or NSP requirements (Part B clause 6(1))

The AER's proposed condition is that:

> "Metering in electricity transmission networks must be installed in accordance with all reasonable requirements of AEMO and otherwise, in accordance with the requirements specified in a connection agreement with a network service provider, whether that network service provider is registered with AEMO or exempted by the AER from registration."

Ausgrid submits that:

(a) The term "network service provider" should not be used to mean either a registered or an exempt person. This is inconsistent with its definition under the NERs (to mean only a registered NSP) – see paragraph 3.8(a) above).

(b) To the extent that this condition was intended to apply to require metering installations that are directly connected to an LNSP's (TNSP's) transmission network to comply with the requirements set out in the TNSP's connection agreement, Ausgrid has no issue.

(c) To the extent that this condition was intended to apply to require metering installations that are *indirectly* connected to an LNSP's (TNSP's) transmission network (i.e. where the metering installation is directly connected to an embedded network which in turn connects to an LNSP's transmission network) to comply with the requirements set out in the *TNSP's* connection agreement, Ausgrid submits that the TNSP would not ordinarily impose requirements in relation to such metering installations, as they are not the TNSP's responsibility. The TNSP is not responsible for metering installations beyond the parent meter.

(d) To the extent that this condition was intended to apply to require metering installations that are directly connected to an embedded network which in turn connects to an LNSP's (TNSP's) transmission network (as in the example above) to comply with the requirements

set out in the *embedded network operator's* connection agreement, Ausgrid has no issue with this. However, Ausgrid submits that if these conditions are intended to impose obligations on the embedded network operator (as the AER has no power to impose them on anyone else), it is not clear who is required to do what under this condition.

(e) To the extent that this condition refers to reasonable requirements of AEMO (presumably intended to apply to the extent that the metering is NEM metering), Ausgrid submits that:

the conditions should not refer generally to requirements of various statutory bodies (such as AEMO), but should instead refer to requirements under relevant legislation and regulatory instruments (such as the NERs). This is to ensure that the conditions do not inadvertently provide the relevant statutory body with a jurisdiction in relation to the subject matter that it would not otherwise have by law;

the AER should be aware of the limitations of the application of the NERs in this context; and

the conditions should not refer to "and otherwise" in this context, as complying with AEMO requirements should not be instead of compliance with a connection agreement.

3.20.4 Distribution networks (Part B clause 6(2) and (3))

The AER's proposed condition is that, for metering other than in transmission networks, meters must either:

(a) **reasonable access for metering reading:** "be installed in a reasonably accessible location with suitable access to facilitate meter reading, whether for billing purposes or customer information" (Part B clause 6(2)); or

(b) **facilities for remote reading:** "have remote facilities to permit access to current metering data either by a readout device or by electronic means including via a web portal or other equivalent facility" (Part B clause 6(3)).

Ausgrid is not sure why compliance with a connection agreement is included for transmission networks but not for distribution networks.

3.20.5 Generators (Part B clause 6)

The AER's proposed condition is that:

> "All *off-market and on-market energy generation* installations, whether connected directly or indirectly to a NEM distribution network, must be metered in accordance with the applicable requirements for direct connection to the NEM distribution or, where applicable, transmission network. Further details are available from the local electricity distribution or transmission network service provider. Additional requirements of AEMO may also apply."

Ausgrid submits that this condition assumes that the LNSP will have responsibility for metering at generation installations in embedded networks. However, the LNSP is not responsible for metering at generation installations unless they are directly connected to the LNSP's network.

3.20.6 Full retail competition: AEMO requirements; metering provider (Part B clause 8(1))

The AER's proposed condition is that:

> "In jurisdictions where customers of embedded or exempt networks have access to full retail competition all metering arrangements must comply with all applicable AEMO requirements for, the installation and maintenance of a metering installation, the registration of meters, provision of metering data and, where necessary, the transfer of the customer to another retailer. An exempt or embedded network operator may be required to appoint an accredited metering service provider or other registered NEM participant, as appropriate, to act as its agent for the provision, installation, registration and maintenance of the metering installation."

Ausgrid submits that:

(a) This condition assumes that the NERs adequately make provision for NEM metering, and that the provisions regarding metering service providers etc will apply in this context as a matter of law. However, as indicated in the above analysis, this is not the case. AER should be aware of the limitations of the NERs in this regard.

(b) However, in practice, if a NEM metering installation is to be installed then it MUST (not may) be installed by an appropriately registered and AEMO accredited MPB.

(c) This condition should not refer to "In jurisdictions where customers of embedded or exempt networks have access to full retail competition", but rather to the circumstances in which an embedded network customer actually takes supply from a registered retailer (rather than where it merely has the right to do so).

(d) For reasons discussed above, this condition should not refer to "all applicable AEMO requirements".

3.21 Metering: conclusion

It should therefore be clear that there are significant gaps in current regulatory arrangements in relation to metering.

The AER should be mindful of these gaps when drafting its conditions of exemption, and hence the extent to which its proposed exemption conditions may or may not work to achieve the desired outcome. Ausgrid also seeks the AER's co-operation in liaising with other regulatory bodies for this purpose (such as in seeking Rule changes).

4 Electrical safety

4.1 Jurisdictional regulation

Ausgrid understands that the responsibility for electrical safety issues will remain with the jurisdictions and will not be part of the National Energy Customer Framework.

These comments therefore refer to the position in NSW.

Ausgrid is concerned that (similarly to the NERs) the existing NSW requirements were not drafted with embedded networks in mind, and do not adequately regulate them.

The AER, in drafting its conditions of exemption, should be aware of gaps in existing requirements.

4.2 AER Guidelines: proposed conditions of exemption

Clause 3 of the AER Guidelines requires that all embedded networks be:

> "installed, operated and maintained in accordance with all applicable requirements within the jurisdiction in which the network is located for the safety of persons and property, including where relevant an industry Code or Guideline otherwise applicable to a network service provider providing similar services. This includes, where applicable, an obligation to have current, and/or maintain, a safety management plan or similar, whether registered or unregistered with a competent safety authority or regulatory agency within that jurisdiction."

4.3 Intention and effect of proposed condition

Ausgrid submits that there is a need for further clarity as to the intention and effect of this proposed condition, when considered in light of existing NSW regulation.

For example:

(a) Query whether the reference to "otherwise applicable to a network service provider providing similar services" is intended to qualify "industry Code or Guideline" only, or whether it was also intended to qualify "applicable requirements within the jurisdiction"? In other words:

Is the condition only intended to impose additional requirements on embedded network operators (which would not otherwise apply) if the requirements are contained in an industry Code or Guideline?

Or is the condition also intended to apply to embedded network operators jurisdictional requirements that are not contained in industry Codes or Guidelines? (If this is intended, how should "applicable" requirements be interpreted?)

(b) Similarly, query whether the reference to "where applicable" in relation to a safety management plan only means where this is otherwise provided for by legislation, or whether it is intended to add a new requirement?

(c) The wording should be clarified regarding to the extent to which this condition is intended to impose obligations in addition to existing legal requirements.

The AER should also be aware of any gaps in existing legal requirements.

4.4 Electricity Supply (Safety and Network Management Regulation) 2008

Currently, under clause 8 of the *Electricity Supply (Safety and Network Management) Regulation 2008 (NSW)*, the Director-General of the Department of Industry and Investment (now the Department of Trade and Investment, Regional Infrastructure and Services) may require a network operator to lodge a network management plan, covering:

(a) network safety and reliability

(b) customer installation safety

(c) public electrical safety awareness

(d) bush fire risk management.

The Director-General, in exercising its discretions, is to have regard to various factors, including the size, nature and complexity of the network operator's transmission or distribution system (clause 8(5)).

Ausgrid understands that the Director-General only currently requires these plans from TransGrid, Ausgrid, Endeavour Energy and Essential Energy.

4.5 Issues arising

A number of issues arise here:

(a) Does the Director-General have the discretion to direct embedded network operators in this regard?

(b) If the Director-General:

does not have this discretion; or

does have this discretion but chooses not to exercise it,

will the AER impose additional requirements?

(c) Who will be responsible for enforcement, auditing etc? Will the AER have a separate role?

4.6 Does the Director-General have the discretion to direct embedded network operators?

As to the first question of whether the Director-General's discretion extends to directing embedded network operators in this regard, under the *Electricity Supply Act 1995 (NSW)* (ESA) (under which this regulation is made), a "network operator" (whom the Director-General has this discretion to direct) is "a transmission operator or a distribution network service provider".

A "transmission operator" is a person who owns or controls a "transmission system". Only those poles and wires declared to be so under a section 93 Ministerial Order constitute a transmission system. In other words, this is on a case by case basis. (Note that there is no licensing regime in NSW for transmission.)

Therefore it would appear that the Director-General does not have the power to require network management plans from embedded network operators whose networks might be regarded as transmission networks in the NEM unless the network is first the subject of a section 93 order.

The definition of "distribution network service provider", on the other hand, is wide and general. It is "a person who owns or controls a distribution system" (note: not just those who are licensed

under the Act). Therefore the Director-General's discretion here is wide, and not just limited to DNSPs licensed under the ESA, but only to the extent that the relevant embedded network comes within the ESA's definition of "distribution system".

Note that the definitions of transmission and distribution systems under the NERs (on the one hand) and under the ESA (on the other) differ.

Under the ESA, there has traditionally been a distinction between "distribution system" (on the one hand) and "electrical installation" (on the other). In general, the latter is intended to cover electrical wires *within* premises, as opposed to wires *to* premises.

However, these definitions appear to be premised on the assumption that a distribution system will always connect to an electrical installation, not to an embedded network.

If, for example, Ausgrid's distribution system connects to an embedded network, and electricity is supplied by a retailer at that connection point, then on the ESA's definitions the embedded network would appear to be an "electrical installation" (because it is beyond the "point of supply").

The ESA does not appear to contemplate a distribution system connecting to an embedded network (being itself technically another distribution system) which in turn connects to an electrical installation.

On this basis, it appears that the Director-General would not have a clear discretion to require a network management plan from an embedded network owner.

4.7 Electricity (Consumer Safety) Act 2004

The *Electricity (Consumer Safety) Act 2004 (NSW)* is generally intended to cover "electrical installations", whereas the *Electricity Supply Act 1995 (NSW)* is generally intended to cover transmission and distribution networks.

NSW Fair Trading administers the *Electricity (Consumer Safety) Act 2004 (NSW)* and oversees the regulation of electrical installations.

As indicated above, we query whether an embedded network (as defined by the AER) should be regarded as a network or an electrical installation. This will then have consequences for what is the appropriate form of regulation and who should be the relevant regulator.

Most importantly, it will be necessary to ensure that an embedded network does not fall between the cracks altogether, not being regarded as either a distribution system or an electrical installation.

"Electrical installation" is defined as follows under the *Electricity (Consumer Safety) Act 2004 (NSW)*:

> "***electrical installation*** means any fixed appliances, wires, fittings, apparatus or other electrical equipment used for (or for purposes incidental to) the conveyance, control and use of electricity in a particular place, but does not include any of the following:
>
> (a) subject to any regulation made under subsection (4)—any electrical equipment used, or intended for use, in the generation, transmission or distribution of electricity that is:
>
> (i) owned or used by an electricity supply authority, or
>
> (ii) located in a place that is owned or occupied by such an authority,
>
> (b) any electrical article connected to, and extending or situated beyond, any electrical outlet socket,
>
> (c) any electrical equipment in or about a mine,
>
> (d) any electrical equipment operating at not more than 50 volts alternating current or 120 volts ripple-free direct current,

(e) any other electrical equipment, or class of electrical equipment, prescribed by the regulations."

"Electricity supply authority" (as defined to in paragraph (a) of the above definition), on the other hand, is defined as follows:

> ***electricity supply authority*** means a person or body engaged in the distribution of electricity to the public or in the generation of electricity for supply, directly or indirectly, to the public whether by statute, franchise agreement or otherwise and includes:
>
> (a) an energy services corporation within the meaning of the *Energy Services Corporations Act 1995*, and
>
> (b) the Country Rail Infrastructure Authority constituted by the *Transport Administration Act 1988*, and
>
> (b1) Rail Corporation New South Wales, and
>
> (c) the Water Administration Ministerial Corporation constituted by the *Water Management Act 2000*."

While an embedded network operator would not fall within (a) to (c), it may still fall within the general description of "a person or body engaged in the distribution of electricity to the public".

If this is the case, then an embedded network is not an "electrical installation".

This being the case, it is possible that an embedded network could fall between the cracks of both pieces of legislation.

4.8 Refusal to connect, or disconnection, due to safety issues

Ausgrid also notes that a DNSP's right to refuse to connect, or disconnect, due to safety issues relates to an "electrical installation" (as defined).

Section 15 of the ESA (under which a DNSP is obliged to connect customers in its distribution district) is subject to any rights to refuse to connect, or to disconnect, specified in the regulations (section 15(3)). For this purpose, clause 5(1) of the *Electricity Supply (Safety and Network Management) Regulation 2008 (NSW)* provides that:

> "For the purposes of section 15 (3) of the Act, a distribution network service provider may disconnect premises from, or refuse to connect premises to, its distribution system if the provider reasonably considers that the electrical installation on the premises is, or is likely to become unsafe if the premises are, or continue to be, connected to the distribution system."

This refers to the refusal to connect, or the disconnection of, an "electrical installation". For this purpose, "electrical installation" has its own definition under the ESA (different from the definition under the *Electricity (Consumer Safety) Act 2004 (NSW)*), as follows:

> "***electrical installation*** means the electrical wiring and associated equipment that are used to convey and control the conveyance of electricity within premises to which electricity is supplied from a distribution system, but does not include anything connected to and extending or situated beyond an electrical outlet socket."

While an embedded network is more likely to fall within this definition than the corresponding definition under the *Electricity (Consumer Safety) Act 2004 (NSW)*, Ausgrid submits that all of these definitions should be reconsidered and amended to ensure that they properly accommodate embedded networks.

4.9 Industry Codes and Guidelines

In terms of applicable industry Codes and Guidelines, Ausgrid notes that there is a significant number of relevant instruments to which it currently adheres in the design, installation, operation and maintenance of its network. (See, for example, page 60 of Ausgrid's Network Management Plan: http://www.ausgrid.com.au/Common/Our-network/Network-regulation-and-

reports/~/media/Files/Network/Regulations%20and%20Reports/Network_Managment_Plan_March_2011.ashx).

However, most of the current NSW Government codes of practice are specific to the existing State owned corporations and rely on robust and well developed Network Management Plans. Private electrical installations are currently only required to comply with the NSW Service and Installation Rules and the *Electricity (Consumer Safety) Act 2004 (NSW)*.

Therefore, if the electrical safety of embedded networks were to be covered largely by reference to Codes or Guidelines, this would require, in NSW, a new Code or Guideline that does not exist at present. Furthermore, it is not clear which Government department would be responsible for setting the required Code or Guideline.

4.10 Enforcement

If the safety of embedded networks is ultimately to be governed at the jurisdictional level (e.g. through safety management plans provided to the Director-General), how will the AER ensure that there is appropriate communication of information and reporting (from the Director-General or from the embedded network operator) to monitor whether or not the condition is being complied with?

If it is the AER's intention to impose additional requirements not otherwise provided for by the legislation, how will the AER enforce these requirements? Does the AER have the resources and expertise to do so? Will it be proactive (for example, conducting audits)?

The AER's sanctions in this regard would appear to be limited. While the AER has a specific power under clause 2.5.1(d) of the NERs to grant exemptions from registration as an NSP, and impose conditions on those exemptions, there is no clear framework for the enforcement of those conditions.

For example, there is no specific requirement on embedded network operators to comply with the conditions, and therefore non-compliance would not appear to be a breach of the NERs or the NEL.

The only sanction available to the AER would appear to be revocation of the exemption. This may be insufficient for adequate practical enforcement.

4.11 Inspection of electrical installations

Currently in practice, DNSPs in NSW provide a service of inspecting private electrical installations based on their Network Management Plan. As a "standard control service", the cost of this service is covered through NUOS charges.

It is unclear whether the exempt network operator would have responsibilities, such as auditing contractor's work, to ensure separately metered portions within their network comply with all technical and safety requirements.

It appears that questions as to responsibilities and accountabilities for electrical safety and compliance throughout embedded networks have not yet been adequately addressed.

4.12 Safety: conclusions

Therefore, similarly to the issues raised above in the context of metering, the appropriate resolution of these issues lies not with the AER alone, but with the legislation itself. Clearly it will be necessary to engage the NSW Department of Trade and Investment, Regional Infrastructure and Services on these issues to ensure adequate regulation.

In the meantime, Ausgrid submits that the AER should be aware of the relevant gaps and limitations. The AER should not assume that clause 3 of the Guidelines adequately deals with the issues.

5 Other issues

5.1 Privity of exemptions and obligations

Clause 5(7) of the Guidelines states that:

> "Applications for exemption are personal to the applicant. They are not transferable."

As a practical matter, Ausgrid queries whether the relevant parties will, on sale of relevant premises or in other appropriate circumstances, think to make provision for the incoming embedded network owner to obtain the relevant exemption from the AER. Even to the extent that the parties do address this, there may be some time gap before the exemption is processed and the relevant obligations are taken on by the new party.

While this issue will not arise in all contexts (such as where the embedded network operator is the owners corporation for a strata plan, which has a necessary degree of permanency), it is bound to arise in others (such as where the embedded network operator is a building owner as landlord).

Perhaps it would be preferable for there to be some transfer of obligations to the new owner by default, at least for an interim period?

Similar issues may arise upon winding up of the embedded network operator.

Perhaps some thought should be given to whether there should be some concept of a "network of last resort" (which might include, for the purposes of metering, a default Responsible Person)?

5.2 Distribution loss factors

The intention of clause 9(1) of the draft conditions is to apply the distribution loss factor applying at the parent metering installation to losses within the embedded network in most cases, thus relieving the embedded network operator from the responsibility to calculate and seek annual approval of a separate distribution loss factor for the embedded network at the child meters within that network.

While a sensible approach, Ausgrid queries whether this approach can be accommodated within the current drafting of clause 3.6.3 of the NERs. For example, this clause refers to the responsibility of "Distribution Network Service Providers". Unlike the definitions of "Network Service Provider" and "Local Network Service Provider", the definition of "Distribution Network Service Provider" under the NERs does not refer to a *registered* NSP, but it is simply "A person who engages in the activity of owning, controlling or operating a *distribution system*". This would appear to extend to an exempt embedded network operator, and hence that entity would have a direct responsibility under clause 3.6.3.

To the extent that there will be site-specific loss factors within embedded networks, Ausgrid notes that its methodology for allocating distribution loss factors is based on tariff classes. Issues may arise in circumstances where the parent is a different tariff class from the children.

5.3 Solar Bonus Scheme and embedded generator connections

The NSW Solar Bonus Scheme has highlighted issues with child metered installations wishing to become small scale embedded generators.

It is clearly the intent of this Guideline to facilitate such connections but how would the generated output be controlled? What involvement would the DNSP have in setting limits or controlling the type of generation installed? Would a conversion of a "brown fields" site to an embedded network make existing Solar Bonus Scheme sites non-compliant, as they would no longer be connected to the DNSP's network?

This will require the DNSPs to prepare their own guidelines as well as those by the jurisdictional regulator.

5.4 What constitutes a "network" in the first place

In paragraph 1 of the Guideline the AER states as follows:

> "In this Guideline the terms 'embedded network' and 'exempt network' and 'embedded or exempt network' are interchangeable. The terms refer to the physical assets that deliver electricity to another person or party and include for example any wires, switches, meters, transformers or other electrical equipment owned, operated or controlled by the applicant. Anyone, no matter how small the network, who supplies electricity to another person over an embedded network of any kind, is providing an electricity distribution service. An exemption may be required for any network by which electricity is supplied to another party, be that party a legal person, corporation, government department or statutory body of any kind."

We understand that the AER takes the view that if the electrical infrastructure (e.g. poles and wires) is owned or operated by a different person from the end-use customer or generator, then the infrastructure will be classified as a "network" and hence the owner or operator of the network will need either to register or obtain an exemption. If, however, the infrastructure is owned or operated by the end-use customer or generator, it will not be classified as a "network", but instead as either an electrical installation (in the case of customers) or part of the generator's facility (in the case of generators).

While this would appear to be a sensible approach to take, it does not appear to be entirely borne out through the relevant definitions under the NERs (such as through the definition of "network", "connection assets" and related terms). For example, the definition would appear to capture a generator's connecting line even if owned by the generator. Furthermore, how would a direct line from a power station to a customer located in the power station grounds be regarded?

These issues should also be addressed through Rule changes for clarity. Furthermore, there is some need for consistency in approach and terminology between the NERs and jurisdictional electricity legislation.

5.5 Legal status and enforcement

Although the AER has formal authority under the NERs to develop and implement the Guideline, Ausgrid queries:

(a) the extent to which exemption conditions are enforceable (noting that the only remedy for breach of condition may be revocation of the exemption); and hence

(b) the appropriateness of exemption conditions as a means of regulating some of these aspects being covered (as opposed to being specifically regulated under NERs or jurisdictional legislation, or in some other way).

5.6 Timing of implementation

Ausgrid understands that the AER intends to implement these Guidelines at the same time as its Exempt Selling Guidelines, and to have these both commence at the commencement of the National Energy Customer Framework (proposed to be 1 July 2012). However, Ausgrid queries what would happen if certain aspects of the National Energy Customer Framework are delayed in any particular jurisdiction (noting that, for example, it is not proposed to commence many of the retail aspects of the National Energy Customer Framework in NSW until 1 July 2013).

6 Response to specific questions for consultation

In this section we set out Ausgrid's response to each of the specific questions for consultation contained within the Consultation Paper.

6.1 Q1: Do stakeholders support the AER's decision to align the classes of exemption in the network Guideline with the Exempt Selling Guideline?

Yes, Ausgrid supports the alignment.

6.2 Q2: Are the classes of exemption clear and easily interpreted?

Yes, in general Ausgrid considers that they are clear.

6.3 Q3: Are there any other network situations that stakeholders consider would warrant a separate exemption category?

Ausgrid queries whether the situation of selling into the market by an embedded generator whilst the network connection is disconnected is covered? Or on other words how does the AER exemption framework intend to deal with an islanded generator selling into the NEM even though there is no physical connection. This is a form of demand or peak price response that market participants are likely to explore even more in the future and should be considered as part of this consultation.

6.4 Q4: Do stakeholders agree that the general conditions are appropriate for exempt networks?

No. See detailed comments in the sections above.

6.5 Q5: Do stakeholders consider any further conditions be included in the general conditions for exempt networks?

See detailed comments in the sections above.

6.6 Q6: Do stakeholders consider the criteria for revocation are appropriate for exempt networks?

Yes, Ausgrid considers that they are appropriate.

6.7 Q7: Do stakeholders consider the proposed process fair and reasonable?

Yes, Ausgrid considers that the process is fair and reasonable.

6.8 Q8: The AER considers common standards for the accuracy of metering will benefit consumers. Do stakeholders agree with this approach?

Yes, Ausgrid agrees with this approach. It is up to the manufacturers to ensure that they have pattern approval. It will be illegal for an ENO use a non-pattern approved meter in these situations.

6.9 Q9: The AER considers that electricity should not be treated to any other service or product with regard to metering. Do stakeholders agree with this approach?

Ausgrid agrees that individual metering is appropriate.

6.10 Q10: The observance of safety standards is essential for consumers to have confidence in exempt networks. Do stakeholders consider the AER's condition will achieve this objective?

No. See detailed comments in section 4 above.

6.11 Q11: As regulatory gaps can arise when related activities are authorised under different legislation the AER considers that this cross-over condition will minimise the prospect of a gap arising in the retail on selling framework. Do stakeholders consider the AER's condition will be sufficient for this purpose?

Yes.

6.12 Q12: Do stakeholders have any suggestions which would improve this condition?

This condition appears reasonable.

6.13 Q13: Do stakeholders consider aggregation should be permitted in exempt networks? If so, why? Or why not?

Ausgrid has no objections to permitting aggregation in exempt networks. However, provision should also be made for disaggregation.

6.14 Q14: Do stakeholders consider the proposed registration arrangements are clear and the information requirements to be sufficient?

We refer to our comments in paragraph 5.1 above.

6.15 Q15: Do stakeholders agree with the AER's metering conditions for exempt networks?

No. See detailed comments in section 3 above.

6.16 Q16: Do stakeholders consider the conditions that are applicable to energy generation appropriate?

No. See detailed comments in section 3 above.

6.17 Q17: Do stakeholders have any comments on electric vehicles or electric charging stations, and the conditions to be applied to them?

Ausgrid queries how this would work and whether a separate category for electric vehicles is warranted. Surely they should be treated as any other load connected to an embedded network?

6.18 Q18: Do stakeholders consider the AER's approach to the application of distribution loss factors to exempt networks to be appropriate?

See comments in paragraph 5.2 above.

6.19 Q19: Do stakeholders have any comments in relation to the AER's approach to external and internal network charges?

The AER's approach appears to be reasonable.

6.20 Q20: Do stakeholders have any comments in relation to the AER's approach to Charge Groups outlined in the network Guideline?

Ausgrid queries the appropriateness of Charge Group E. Parties should be free to enter into alternative commercial arrangements.

6.21 Q21: Should any other charge groups be permitted by the AER? If so, why?

Ausgrid does not have any particular comments on this issue.

6.22 Q22: Do stakeholders have any comments in relation to the requirements for registration or application for an individual exemption.

Ausgrid does not have any particular comments on this issue.

6.23 Q23: Are there any other matters the AER has not considered in this draft network Guideline which stakeholders believe should be addressed?

See generally our comments in the sections above.