1 February 2013

Mr Warwick Anderson
General Manager – Network Regulation Branch
Australian Energy Regulator
GPO Box 3131
Canberra ACT 2601

Dear Mr Anderson,

The NSW DNSPs' Response to the *Discussion Paper – Classification of metering services in NSW – Matters relevant to the framework and approach for NSW DNSPs 2014-19*

The NSW Distribution Network Service Providers, Ausgrid, Endeavour Energy and Essential Energy (the NSW DNSPs) welcome the opportunity to provide this joint submission in response to the *AER's discussion paper on classification of metering services in NSW – matters relevant to the framework and approach for NSW DNSPs 2014-19 dated December 2012* (Metering Discussion Paper*).*

Introduction

In its Metering Discussion Paper, the AER states that it proposes to change the way in which it regulates Types 5 and 6 metering services, with the objective of providing more flexibility and choice for households and small businesses. The AER considers that 'unbundling' Types 5 and 6 metering services will result in a number of benefits for customers including better information about the costs of metering services, greater choice between meter types, the absence of barriers to participating in demand side management schemes, more cost-reflective pricing and increased competition in metering services.[1]

The NSW DNSPs support the principles of customer choice and customer enablement; however, we consider that current metering arrangements, including competitive sourcing of meters, are providing efficient outcomes for customers. The NSW DNSPs also understand the issues raised by the AER in relation to potential duplication of charges for customers who choose to install a Type 4 meter with another metering service provider. Although the NSW DNSPs support the AER's broader policy objectives outlined in the Metering Discussion Paper, we have significant concerns about the implications for the long term economic welfare of customers and the efficient operation of the National Electricity Market (NEM) arising from how these objectives are proposed to be achieved. In summary:

- There are significant equity, economic welfare and market implications associated with providing customers with choice of meter type due to metering's enabling role for pricing. As the meter type determines the tariff options available to customers, customers are likely to choose the meter and tariff options that maximise their individual benefit at the expense of customers in total. This has the effect that, although the customer at an individual level may be better off in terms of the price they pay for electricity, customers as an overall group are likely to be disadvantaged. We explain this comment in more detail below.

[1] Discussion paper, classification of metering services in NSW – matters relevant to the framework and approach paper for NSW DNSPs 2014-19, p.2

- Allowing customers to choose an accumulation (Type 6) metering solution is inconsistent with national policy direction which supports interval metering. The AEMC in its Power of Choice Review recognised that interval data availability is a prerequisite for cost reflective pricing and increased DSP opportunities.
- There are limits on how cost-reflective the prices for types 5 and 6 metering services will be in any event given the complexities associated with treatment of metering assets in the RAB, the manner in which costs are allocated and historical metering configurations. Given the likely distortions to the price signal, we question whether the increased costs associated with removing metering costs from Distribution Use of System (DUoS) charges are justified.

For these reasons, and as explained in more detail below, the NSW DNSPs' preference is to retain the current classification of Types 5 and 6 metering services as standard control services, the costs of which should be recovered as part of DUoS charges. This response supplements Network NSW's response to the AER's Preliminary Framework and Approach Paper, which sets out in further detail the NSW DNSPs' reasoning as to why Types 5-7 metering services should remain classified as standard control services.

'Unbundling' Types 5 and 6 metering services

Although the NSW DNSPs' preference is for Types 5 and 6 metering services to remain standard control services (the costs of which are recovered through DUOS), should the AER decide to reclassify these services as alternative control services, the NSW DNSPs will work with the AER to unbundle Types 5 and 6 metering services to provide increased transparency of costs for metering services.

We note however, that the complexities associated with determining the appropriate charges for Types 5 and 6 meters (outlined in further detail below) mean that the eventual metering charges (assuming the retailer passes them through to customers) may not be sufficiently cost-reflective to provide an effective price signal and foster competition in the marketplace. The charges will reflect average costs per meter type, potentially based on a standard set of metering configurations, using a cost allocation methodology for each component service based on the cost drivers for that service. The charges may also incorporate a charge to recover the costs of existing metering assets in the RAB.

The NSW DNSPs recognise that unbundling metering charges will achieve the objective of providing individual customers with better information about Types 5 and 6 metering costs. This will provide them with more information to compare metering services offered by third party service providers against meter provision, meter reading and meter maintenance services offered by the LNSPs. However, as the main costs for metering in NSW are the meter installation costs (which the customer pays directly to the accredited service provider), these costs should also be an explicit input into the customer's decision-making process. That is, to make more informed decisions about metering services offered by third parties, customers also need better information about installation/removal-related costs associated with exiting those arrangements and to understand how any requirement to change the meter may affect the total price.
Unbundling metering charges and making the necessary accounting and IT system changes to allow them to be billed will be a time consuming and costly exercise for the DNSPs. These costs have not yet been fully scoped as they will ultimately depend on the form of control applied. However, the NSW DNSPs anticipate that should the proposed classification changes come into effect, costs will arise in a

number of areas including system and process changes required to record, track and validate location and responsibility for each meter, validation of records for billing purposes, site visits to verify meter locations and numbers, increases in the number of customer complaints handled in relation to customer bills, work involved in establishing any new charging regime, including modelling income and costs and determining from a systems perspective how maintenance costs for customers who use an alternative meter provider are to be removed from bills. Given the substantial effort and costs likely to be involved in removing meter provision, reading and maintenance charges from DUoS for relatively limited benefit to consumers, we question the efficacy of doing so.

Economic welfare implications of providing customers with choice of metering

The objective of economic regulation is to ensure that DNSPs have the incentive to convey the most efficient price signal possible. The choice of metering plays a critical role in determining the extent to which the DNSP can respond to the regulatory incentives to set prices efficiently. Where the DNSP determines the choice of meter type, it has the incentive to select metering that achieves the most desirable overall outcome for consumers in the long term. The pricing solutions enabled by this choice of meter type will assist the DNSPs in signalling the costs imposed by customers by using the network at peak times. As the ability to introduce more sophisticated tariff options may lead to more efficient use of the network, customers as an overall group will be better off in the future. This means there is a strong economic rationale for the DNSPs (rather than end-customers) to decide the base metering solution that is best able to satisfy their regulatory obligations to convey efficient price signals to customers.

Where the customer is allowed to choose their meter type, it is likely that the decision will be made based on the customer's individual circumstances, ignoring the impact (positive or negative) of their decision on other customers. For example, a customer with a peaky network usage pattern who is on a flat tariff is unlikely to choose to have their meter upgraded to facilitate a time-varying price structure because by remaining with their existing meter, they may avoid receiving a more cost-reflective network price signal – which would require them to pay for the costs they impose on the network.

Further, customers are not always in a position to assess the benefits of a particular type of metering against the costs. Although it is possible for the DNSPs to identify average Type 5 and 6 metering service costs and to provide this information for each connection point as a separate line item on the network bill DNSPs provide to retailers, the bill received by the customer (assuming retailers include the metering costs as a separate line item), will only include the costs and not the benefits, associated with each metering type. This is likely to predispose customers to choose the cheaper accumulation (Type 6) metering solution where that choice is available. This may be able to be countered with effective consumer education initiatives and customer communications campaigns that explain the benefits of a more expensive metering solution. However, it is likely that a large number of customers will choose the cheapest option, even if this embeds pricing subsidies and limits DSP opportunities in the future. We seek clarity from the AER on which party would be responsible for these consumer education initiatives and how these costs would be recovered.

Given interval data is required in order for the DNSPs to provide efficient price signals, the NSW DNSPs require metering technology that provides interval data capability. This is consistent with the current national policy direction and the AEMC's

Power of Choice review, which recognises that the availability of interval data is a prerequisite for cost-reflective pricing and increased demand side participation opportunities. There are also regulatory restrictions on reverting from a Type 5 metering installation to a Type 6 installation.[2] This means that in practice, customers who have Type 5 meters only have a choice between Type 4 and Type 5 meters. Given the current policy direction, it would seem that customers should only be permitted to choose a meter which enhances the information and options available to the customer and to the market more generally with respect to energy consumption.

Changing the classification of metering services also has other DSP implications. Where metering is classified as a standard control service, trade-offs can be made in demand management programs between traditional network augmentation and installing metering and implementing non-network alternatives. Where metering is classified as a standard control service, network and non-network assets are treated equally. If the metering services are separately classified as alternative control services, although all customers may benefit from the demand reduction initiative, the costs of that initiative will no longer be charged to all network users; rather, the costs will now be attributed to only those customers who are undertaking the demand reduction program. The allocation of metering costs to individual customers could make the program uneconomic for the customers who would otherwise take up the demand management program, making the program unviable. This would be a substantial barrier to DSP.

Economic welfare and market implications of having a separate metering charge

While the NSW DNSPs accept that any inefficiencies associated with types 5-7 metering services could be addressed by having transparent metering charges and ultimately exposing metering services to greater competitive market forces, the extent to which this delivers economic benefits to customers clearly depends on the extent to which the existing services are inefficient.

The view of the NSW DNSPs is that increased contestability in the type 5-7 metering services market has the potential to ultimately increase the price consumers pay for electricity services. This is because under the current regulatory framework, there are significant efficiencies and economies of scale associated with the LNSPs' monopoly provision of Types 5-7 metering services under the NER.

Current efficiencies in Types 5-7 metering services

We note that the AER is proposing that only some aspects of metering Types 5-7 services – i.e. meter provision, meter maintenance and meter reading activities, are to be classified as alternative control services for the next regulatory period. The aim is to increase competition in metering services in the residential and small business markets and to increase efficiencies. Leaving aside the current regulatory restrictions under the NER on increasing contestability in types 5-7 metering services, as noted above, there are already efficiencies associated with economies of scale in meter reading and meter provision services. For example:

[2] Clause 2.6 of the Metrology Procedure: Part A National Electricity Market, published by AEMO

- meters are currently procured under strategic supply arrangements entered into as a result of competitive tenders. Under these arrangements, the DNSPs are able to leverage their bulk purchasing power to deliver efficiencies; and
- there are significant economies of scale associated with having one meter reader for each geographic area as it avoids duplication of meter reading routes.

The NSW DNSPs' view is that any change in regulatory and market arrangements for Type 5-7 metering services would need to replicate relevant aspects of the current monopoly arrangements in order to capture efficiencies and economies of scale and to manage the risk of costs in this market increasing to the level experienced in the contestable Type 1-4 metering services market.

Ausgrid's experience as a metering services provider in both the contestable and non-contestable markets indicates that the cost of providing metering services for a Type 4 site is currently approximately five times the costs of providing the equivalent service for a Type 5 site, even though the physical meter used may be the same. Although some of the higher costs for a Type 4 site arise as a result of meter churn (which we understand the AEMC is seeking to address through the establishment of metering coordinators as new market participants), the main increase in costs is as a result of the loss of economies of scale in meter reading services associated with greater inefficiencies in meter reading routes. In addition, the manual work involved in ensuring meter data and associated records are appropriately aligned for a Type 4 site where the physical meter change date differs from the date of the change in the retailer also drives costs in the contestable metering services market. This work (and therefore costs) would increase significantly if residential and small business customers' metering services were to become contestable

Effect on contestable installation services market

Meter installation services in NSW for Types 5 and 6 meters are contestable and highly competitive – there are over one thousand service providers in the market. If this work is undertaken by end-to-end metering service providers, similar to those in the Type 1-4 market, the level of competition in the market is likely to reduce significantly due to the competitive pressure on service providers who only provide installation services – and not the meter reading and maintenance elements of the service. The NSW DNSPs strongly recommend that the AER undertake its own investigations on the potential impact on the existing market for installation services of its proposed approach to the economic regulation of metering services.

Establishing metering service charges

It is unclear how the AER would determine a charge for meters installed at a customer's premises as the type (i.e. Type 5 or 6), the number of meters and load control devices (for example, frequency injection relays) and the number of phases vary for each site. Metering costs are currently calculated per connection rather than per meter for billing purposes. The AER's proposed approach of identifying the meter types at each premises and multiplying them by the number of meters of that type does not take into account the complexity of existing metering installations and is potentially inequitable for customers who have particular metering configurations for historical reasons. Meter configurations across the network reflect the number of phases, whether a site has controlled load and the type of controlled load, the capacity of the conductors, the type of load connected and the connection and tariff policies applicable at the time of installation. For example, Ausgrid's metering

connections policy documentation lists eighteen different configurations and its billing system has seventy different permutations coded into the software.

A significant amount of work would need to be undertaken across the NSW DNSPs in relation to connections policies, including consolidating metering configurations, potentially mapping historical metering configurations against an approved set of configurations for the purpose of billing individual customers, determining other drivers of metering services costs by meter type (or class) and establishing an appropriate cost allocation methodology.

The charging regime will require significant consideration and further discussions between the DNSPs and the AER. A key issue is the treatment of residual metering assets in the regulated asset base (RAB) and how these costs are to be recovered. For example, if a customer with Type 6 metering changes to a Type 5 metering solution, will the residual costs be recovered from the remaining Type 6 customer base, or is it more equitable for these costs to be recovered across the entire customer base?

There are both fixed and variable cost elements of the various metering services that will need to be identified and appropriately reflected in customer charges to ensure those charges are as cost-reflective as possible. For example, Essential Energy uses internal employees to provide meter reading services. Where a customer chooses to install metering with a different meter provider, there will not be a reduction in fixed costs for meter reading in relation to the relevant meter reading route. Cost reductions will only be possible when the volume reduces to the point that operating cost reductions are possible.

The NSW DNSPs also seek clarity on how metering investment costs affected by meter churn are to be recovered. Approximately 25% of connection points in Ausgrid's network area, and approximately 20% of connection points in Endeavour Energy's and Essential Energy's network area, change customer ownership each year. An outgoing customer's choice of meter will have a significant bearing on the charges an incoming customer will pay and their available tariff options. Meter installation costs (currently borne by the customer directly in NSW as this is a contestable service) are significant and pose a barrier to changing out the meter. Incoming customers are likely to face the installation cost burden of replacing the meter if the meter does not enable their tariff choice. The AER will need to consider how to address recovery of costs associated with meter assets where those assets have been replaced as a result of customer churn.

Our understanding is that, under the transitional Rules, the AER is required to classify the services, describe the control mechanism and formula to give effect to the control mechanism by the end of March 2013 as part of the Framework and Approach process. To meet this challenging timeframe, we would appreciate the opportunity for further discussions on the proposed charging regime with the AER as soon as possible.

Definitions of Meter Types

In its metering discussion paper, the AER equates Type 4 meters with smart meters. The Type 4 meters currently used by the NSW DNSPs are capable of being remotely read, but do not have the characteristics of a full AMI-type meter, so do not currently provide the additional customer benefits associated with smart meters.

Attachment C sets out further information on how metering Types 1-7 are defined in the NER and the characteristics of each meter type.

Components of metering services and their classification

The AER's description of metering services for classification purposes is not consistent with the current descriptions in the NER and is not an exhaustive list of all activities the LNSPs currently perform for type 5-7 metering services in discharging their responsible person obligations under the NER.

Under the NER, meter provision services for which the LNSP is the responsible person are defined as "providing, installing and maintaining type 5-7 meters".[4] Meter data services for which the LNSP is responsible is defined as "collecting meter data from each metering installation for which the LNSP is responsible, the processing of that data and the delivery of the processed data to the metering database and to parties entitled to that data…"[5]

Attachment A sets out how the AER proposes to classify the various components of metering services and the extent to which these align with the activities currently undertaken by the NSW DNSPs in providing metering type 5-7 services. We suggest that the AER's descriptions of each of the component metering services are modified to align with the activities currently undertaken in providing those services, as this will facilitate a price signal for each service that is likely to be more cost-reflective. The NSW DNSPs also seek clarity on the treatment of meters that have standard control functionality (e.g. ripple receiver or time switch) and a metering function within the one asset. In Ausgrid's area alone, there are over 490,000 load control customers.

Given metering is an area where there is likely to be significant change in market and regulatory arrangements in the near future, we also seek clarity from the AER on the classification and cost recovery implications of any new metering services or components of metering services. Our concern is that the existing service descriptions may not be broad enough to enable the DNSPs to recover costs of new aspects of those services.

Conclusion

Should the AER decide to reclassify Types 5-7 metering services to alternative control services, the NSW DNSPs will work with the AER to 'unbundle' the meter provision, meter reading and meter maintenance aspects of Types 5 and 6 metering services in the interests of increased transparency of metering service charges. However, it is our view that although unbundling charges for components of Types 5 and 6 metering services will provide customers with better information about metering charges, it will not meet the AER's objective of increasing customer choice of meter type and will have very little impact on competition in the market for metering services for a number of reasons, including because:

- of the current regulatory restrictions on increasing contestability in the provision of Types 5 and 6 metering services arising from the 'responsible person' role for Types 5-7 metering services the DNSPs are required to perform under the NER[6].

[4] NER clauses 7.2.1(a) and 7.2.3
[5] NER clauses 7.2.1(a)(2) and 7.2.3(a)(2)
[6] Under the National Electricity Rules clause 7.2.3(a)(2), outlined in further detail in Network NSW's response to the AER's Preliminary Framework and Approach Paper.

- the charges may not be sufficiently cost-reflective to send an appropriate price signal in any event, given the difficulties discussed associated with establishing metering charges; and
- there are already significant efficiencies in the monopoly provision of Types 5 and 6 metering services associated with economies of scale.

From a network perspective, price impacts for customers are minimised in the long-term if the network is utilised efficiently and high cost-to-serve customers are charged prices that reflect the underlying costs of supply. As outlined above, 'customer choice' at the network tariff level and in relation to meter type is not in the long-term interests of consumers as it can lead to inefficiencies and drive higher costs, and therefore higher electricity prices, in the long-run.

Given that the proposed change in classification of metering services to alternative control services to facilitate the 'unbundling' of metering services and associated charges will only provide limited benefits to customers, and may in fact lead to outcomes that are inconsistent with the AEMCs' Power of Choice Review, the National Electricity Objective and will involve substantial additional costs, the NSW DNSPs' view is that Types 5 and 6 metering services should remain classified as standard control services.

If you would like to discuss this matter further, please contact Mr Mike Martinson, Group Manager Regulation at Networks NSW on (02) 9249-3120 or via email at michael.martinson@endeavourenergy.com.au.

Yours sincerely,

Vince Graham
Chief Executive Officer
Ausgrid, Endeavour Energy and Essential Energy

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Attachment A

AER's proposed classification of metering services

Proposed service	AER description	AER proposed classification	Comments
Meter provision	The capital cost of purchasing the metering equipment	Alternative control	As mentioned above, although there are average capital costs for types 5 and 6 meter hardware, any charge per connection point would need to take into account historical metering configurations. There would also need to be a method for recovering costs associated with existing metering assets in the RAB. We note that a number of metering service activities that the DNSPs undertake as part of meter provision services are not covered by this service classification. They include meter procurement activities, logistics and storage and contract management activities. We anticipate that these overheads would be included in the meter provision charge for each meter type to promote a more cost-reflective price signal. We also note that recovery of metering investment costs when meters churn is a significant issue. For example, would the outgoing customer pay an exit fee? Alternatively, would the full capital cost of the meter be charged to customers up front? We note that one of the issues associated with increased contestability in the Type 5-7 metering services market is that as the customer base declines, the cost of metering assets in the RAB is spread across a smaller customer base, meaning charges for those customers increase. The NSW DNSPs would like to understand the proposal for recovering costs associated with metering investment and seek further clarity from the AER in this respect. 'Meter provision services' as defined in the NER include meter installation and maintenance. It may be necessary to distinguish between the NER definition (which is for the purpose of defining the responsible person role) and the definition of meter provision services for classification purposes.
Meter installation	On-site meter connection at	Unclassified	We assume this classification would only apply to new and upgraded installations

Proposed service	AER description	AER proposed classification	Comments
	a customer's premises		provided contestably by accredited service providers (note that the NSW DNSPs undertake meter installation work as part of meter maintenance activities). It is also necessary to consider how installation services would be classified where this work is undertaken by the DNSP due to complexity of the installation. For example, Essential Energy installs all CT metering on the Essential Energy network.
Meter maintenance	Works to inspect, test, maintain and repair meters	Alternative control	Meter maintenance activities are predominantly to manage the networks' compliance with regulatory requirements (e.g. meter sample testing). Meters are grouped into populations and replaced when a particular population fails a random sampling test. Meter maintenance costs are cyclical, arise in the context of the networks' asset management practices and are not within customers' control. For these reasons, it is not a cost that is appropriately borne by individual customers. Similarly refurbishment programs that may result from this testing, should not be a cost borne by individual customers. The networks undertake a significant amount of meter testing (e.g. for new and upgraded products) and quality control work prior to meters being installed at customers' premises. These costs are not attributable to individual customers. Laboratory services utilised in the testing of meters comprise mostly hardware (depreciation) and labour costs and are not always easily attributed as a unit rate. If these broad-based maintenance costs are to be extracted from DUOS and charged separately to customers, they will need to be smeared across the customer base in the form of a fixed charge for each customer.
Meter reading	Quarterly or other regular meter reading	Alternative control	Please clarify whether special meter reads would remain separately classified and charged as a miscellaneous/non-network service. We note that 'meter reading' is part of meter data services as defined in the NER. A disconnection service usually includes a final read. Under the proposed arrangements, the disconnection service would need to be a separate service from the final read as where the metering service is not provided by the DNSP there would need to be two field visits (one from the DNSP to disconnect the service and one from the meter services

Proposed service	AER description	AER proposed classification	Comments
			provider to read the meter).
Energy data services (defined as 'meter data services' in the NER – excluding meter reading services).	The collation, processing, storage and provision of access to energy data for the purpose of providing usage information to retailers, customers or other parties as required	Standard control	We note that with the exception of meter reading, these services would all remain standard control services, the costs of which are recoverable under DUOS charges

Attachment B

Detailed comments in response to the AER's discussion paper on classification of metering services in NSW

Section	AER comment	DNSP comments
1	The AER considers unbundling types 5 and 6 metering services will benefit customers in several ways: • customers will have better information about the cost of all metering services	• Customers will have better information about some costs associated with metering services (namely, average meter hardware costs, average maintenance costs and average meter reading costs) for aspects of Types 5 and 6 metering services the LNSP provides in its 'responsible person' role. However, for the reasons outlined above, these charges may not be sufficiently cost-reflective to send the appropriate price signal to customers to effect the policy objective of increased competition. It will, however, provide better information around the DNSPs' metering costs to enable customers to compare offers from third party service providers in the market. • There will need to be an appropriate method of recovering existing investment in metering in the RAB. This may distort the price signal customers receive, depending on how this is charged. • As installation services (currently provided contestably for new and upgraded metering installations) are the main component of metering costs for customers, customers need to be provided with accurate information about the meter installation-related costs they may incur if they choose to change their meters, so they can take this into account in the decision-making process.
	• customers will have greater choice as they will be able to switch between meter types (if they wish) without having to pay for services they do not use)	• The NER provide that a Type 5 metering installation cannot revert to a Type 6 metering installation.[6] This means there is currently a regulatory restriction on customers exercising choice in respect of meter type (i.e. choosing to change from a Type 5 to a Type 6 meter). While policy issues regarding customer choice will need to be resolved through the Power of Choice review and associated rule change, it is already evident that it would be contrary to national policy direction for customers to be able to choose to revert to a meter which removes the scope for customers to understand their consumption patterns and too be

[6] Clause 2.6 of the Metrology Procedure

Section	AER comment	DNSP comments
		charged in accordance with their consumption pattern. It would seem that under current policy direction, customers should only be permitted to choose to install a meter which enhances the information and options available to the customer and the market more generally with respect to energy consumption. This is discussed further below. • If a customer switches between meter types, the investment costs associated with existing metering assets will still need to be recovered either from the remaining customers with that meter type, or from the customer base more broadly, so there will still be aspects of the service that customers more broadly will pay for in one form or another. • Where the asset is prematurely replaced (i.e. before the end of its technical life), in the absence of exit fees of other compensatory arrangements, there will need to be a much shorter depreciation period than currently used and a higher cost of capital consistent with a competitive market rate. This will result in increased metering costs to customers. • More importantly, there are significant equity, economic welfare and potential market failure implications associated with providing customers with choice of meter type. The meter type determines the tariff options available to customers. If individual customers are provided with choice in this respect, it is likely that they will choose the meter and tariff options that maximise their individual benefit at the expense of customers in total. i.e. Although the individual customer may be better off, customers as an overall group will be worse off in the future - given that customers with more peaky usage are likely to want to avoid cost-reflective pricing (enabled by interval metering) because it would mean that they would be required to pay for the costs they impose on the network. For this reason, the NSW DNSPs support customer choice as between those meters capable of providing interval data (Type 4, Type 5 and smart meters), but not for Type 6 (accumulation meters). For the same reason (i.e. the economic welfare implications for all customers in the long run), the NSW DNSPs do not support customer choice of tariff at the network level. The reasons for this are set out in more detail in Ausgrid's response to the AEMC's Power of Choice review. We do however support customer choice of tariff at the retail level.
	• customers will not face barriers that could restrict them from participating in innovative demand side management schemes that help to reduce the cost of electricity	• Currently, there are no barriers that prevent customers from requesting time-based tariffs (and interval meters to enable this) to enable them to better manage their energy bills, and to participate in available demand side participation activities. • As mentioned above, an individual customer may be able to reduce their own electricity costs by choosing a meter and tariff option that facilitates this. However, if the individual is

Section	AER comment	DNSP comments
		not paying a cost-reflective price for their network usage, this provides that customer with an incentive to make their consumption patterns worse, thereby imposing greater overall costs on all customers. • As metering can already be procured, installed and maintained contestably, changing the classification of some aspects of metering services will not remove barriers to participation in DSP schemes offered by third parties. However, as third party service providers are acting in their own commercial interests, we question whether the package these service providers offer to individual customers (i.e. the metering and tariff offer in combination with other services) will result in lower overall costs for that individual customer. There are a number of potential risks and hidden costs for the customer that may not be made apparent in the initial service offer. For example, in NSW, meter installation services are contestable and the customer engages directly with a third party accredited service provider and pays the third party directly for meter installation. If a customer who signs up to a package deal offered by a third party service provider (e.g. for meter provision, meter maintenance and electricity charges) wishes to exit the arrangement, the customer is likely to incur the installation costs of changing the meter out at the time of exit. Under the current industry arrangements, the meter hardware would be provided by the LNSP at no additional cost to the customer (it would be recovered through DUoS charges). However, under the proposed new arrangements, presumably the customer would also need to pay the costs of the new meter hardware, in addition to the installation costs, in order to exercise a choice to change tariffs (assuming a different meter type is required). • This also raises issues relating to customer churn. Given approximately 25% of connection points in Ausgrid's network and 20% in Endeavour Energy's and Essential Energy's network area change customer ownership each year, an outgoing customer's choice of meter will have a significant bearing on the charges an incoming customer will pay and their available tariff options. Incoming customers will face the costs burden of replacing the meter if the meter does not enable their tariff choices.
	• metering services will more closely reflect the actual cost of providing those services, which is likely to increase efficiency	• We support the unbundling of meter charges to the extent this increases cost transparency and promotes competitive tension. However, as mentioned above, we have significant concerns from an economic welfare perspective of providing individual customers with choice of meter type and network tariff because of the longer-term implications this is likely to have for all customers in the form of increased electricity prices.

Section	AER comment	DNSP comments
		• Under the proposed arrangements, the charge on the customer's bill for metering maintenance, the meter hardware provision and meter reading costs would represent an average cost for each meter type (using a cost allocation methodology), and will not reflect the 'actual' costs to serve a particular customer. We understand the AER is proposing that the customer would be billed the average cost of the relevant meter type multiplied by the number of meters of that type at the customer's premises. Given the number of historical configurations for metering, a price based on the number of meter units at a customer's premises is likely to distort the price signal. We will need to work with the AER to determine prices based on modern equivalents of historical configurations (or something similar), and to determine an appropriate cost allocation methodology. Given the complexities involved in translating costs for metering services into prices, we are concerned that the eventual charges on customers' bills will not be sufficiently cost-reflective to send an appropriate price signal in any event. Given this, we wonder about the efficacy of pulling out metering service charges from DUoS given the effort and costs involved for little discernible benefit to customers. • In relation to the 'increased efficiency' argument, some components of metering provision services and meter data services the AER is seeking to re-classify are outsourced by the NSW DNSPs to third parties under competitive supply arrangements. Meter hardware is currently procured under supply agreements entered into as a result of competitive tendering arrangements. Ausgrid's and Endeavour Energy's meter reading has also been outsourced to third party providers as a result of a competitive tender and installation services are provided contestably in NSW. The NSW DNSPs' view is that these services are already provided at an efficient cost, so increasing price transparency will not necessarily lead to increased efficiency. Nevertheless, we are happy for this to be tested and support increased cost transparency to facilitate this. • In terms of the mechanics of the arrangement, DNSPs would provide the relevant metering services costs on the network bill to the customer's retailer. To further the goal of price transparency, there would need to be an obligation on the retailer to pass this through to the customer.
	• metering service provision will be more competitive, albeit that under current legislation NSW DNSPs will still provide the most basic meter	• As acknowledged by the AER, in the short term, changing the classification of Type 5-7 metering services will not lead to increased competition in the metering services market because of the role of the LNSP as "responsible person" for Type 5-7 metering under the

Section	AER comment	DNSP comments
	types.	National Electricity Rules (NER). • We note that in the longer term (assuming the current regulatory restrictions in the NER are removed), increased competition in the metering services market may also lead to increased prices for consumers because of the costs associated with meter churn and diseconomies of scale in meter reading and procurement that are likely to arise as a result of a competitive market (unless these issues can be satisfactorily addressed through industry reform that replicates some of the existing economies of scale experienced by LNSPs in their 'responsible person' role). • As noted above, there are also longer term costs to the network (and ultimately to consumers) associated with customers choosing tariffs that are not reflective of the cost of supply. Although increased cost transparency may assist customers at an individual level to make more informed choices about the meters they use and the tariffs they choose, this is of little benefit if the effect of competition and increased consumer choice in this respect results in overall higher electricity prices for all customers. • 'Metering service provision' involves more activities than the simple provision of a meter to a customer. It also includes procurement activities, meter testing, quality control, logistics and contract management activities, testing of meter products to ensure compliance with regulatory and contractual requirements, the logistics associated with forecasting, ordering, storing, distributing and tracking meters and managing supplier contracts. We would appreciate further clarity from the AER on how these services would be categorised and classified. At this stage, we assume all components of metering provision services would form part of the metering provision charge on the customer's bill in order to send a more cost-reflective price signal. • We also seek clarification on the comment that 'under current legislation, the NSW DNSPs will still provide the most basic meter types'. Is this just an acknowledgement that the LNSP is currently the responsible person for type 5-7 metering services?
	The AER recognises that there are also potential disadvantages for customers that may result from NSW DNSPs unbundling types 5 and 6 metering services, there may be transitional and/or ongoing administrative costs for the NSW DNSPs which they need to recover from customers.	• Additional costs include the ongoing costs of past investment in metering while the relevant assets remain part of the RAB. As mentioned above, these costs would need to continue to be recovered from customers. • There will also be ongoing administrative costs for the DNSPs incurred as a result of managing a separate RAB for metering, along with the technology and system changes (not yet scoped) required to effect billing changes. There are also costs associated with the

Section	AER comment	DNSP comments
		additional work involved in managing issues relating to network connections where third party providers of meters and installation services fail to configure metering installations in a manner consistent with network requirements. • As mentioned above, unbundling that leads to customer choice (of type 6 meters) or of network tariffs that are not cost-reflective is likely to lead to higher electricity prices for all consumers in the long term, in contravention of the national electricity objective. The administrative and ongoing costs outlined above are immaterial when viewed in this broader context of the potential for market failure arising from customer choice of metering and network tariffs.
2.1	The following customers are paying twice for metering services because the NSW DNSPs currently bundle types 5 and 6 metering services into standard electricity charges: • customers that switch from a type 5 or 6 meters to a type 4 smart meter; • customers that have only installed one type 5 or 6 meter.	• The DNSPs would still need to recover the remaining costs of providing meter provision and meter data provision services through DUoS, as well as the residual costs associated with the past investment in metering assets. i.e. If a Type 6 customer changes meter types, the residual costs associated with the replaced meter would need to be recovered either from the overall customer base, or from the remaining Type 6 customer base. • There are currently multiple metering permutations, reflecting historical policy drivers and metering technology available at the time of installation. It will be necessary to develop a finite list of metering configurations (or similar) for charging purposes, aligned to modern metering standards, to manage the inequities associated with charging consumers based on the number of pieces of metering equipment at the customer's premises. The NSW DNSPs are undertaking further analysis to determine the relevant cost drivers of each of the metering services the AER proposes to classify as alternative control services. • We agree that a customer should not be required to pay for services that are not provided. We are undertaking analysis on the likely $ value per annum a customer would currently pay for maintenance charges (recovered through DUoS), with the objective of removing these costs from the bills of customers who have Type 4 meters.
2.2	...there would be a regulatory obligation for NSW DNSPs to directly base the price of type 5 and 6 metering services on the costs of providing these services.	• Costs need to be considered in the context of the benefits that arise from each metering type and where those benefits accrue in the supply chain. Various benefits from interval metering accrue to networks, generators, retailers and customers. As outlined above, interval meters and associated metering services are more expensive than an accumulation metering solution. Customers who choose an interval metering solution are assisting in delivering broader benefits across the supply chain, including the longer term price benefits

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		for all customers. This means that customers with accumulation meters can avoid the incremental cost of an interval meter and effectively benefit unfairly by receiving the benefits that interval metering delivers to all customers. • A more equitable arrangement would be to share the costs of metering across the customer base, reflecting the shared benefits delivered by interval meters. The alternative is to structure the Type 6 charge to address this inequity, but this may not be consistent with the AER's objective of cost-reflective pricing by meter type.
2.3	Type 4 meter providers may compete with Type 6 meter providers on non-price aspects. When choosing between meter types, customers may compare both price and non-price benefits. For example, Type 4 meters offer optional features not available with Type 5 or Type 6 meters, such as real-time access for customers to meter data showing their electricity use. A customer may find this beneficial in managing their household demand to take advantage of time-based electricity tariffs.	• A typical Type 4 meter does not allow real time access to customer metering data as the meters are read remotely on a daily basis. Interval data collected through traditional Type 4 methods will only provide historical, aged data. The way to provide real time data to end-use customers is via an additional port on the meter, a home area network or an in-home display. • See our comments in Attachment C on the difference between smart meters and current Type 4 meters at a functional level.
2.5	The AER considers that unbundling will not necessarily drive customers to the lowest cost meters…Customers can only assess and compare all price and non-price benefits for each meter type when NSW DNSPs unbundle Types 5 and 6 metering services. A customer can then make a better, more informed and efficient choice of which meter type best suits their needs. Furthermore, the most suitable meter type will be different for each customer.	• As mentioned above, 'customer choice' is a worthy objective for individual customers, but not necessarily for electricity consumers as a whole. The economic concept of 'customer choice' is usually applied in the context of end-product markets and is problematic when used in the context of DNSPs which provide network capacity to retailers. It is particularly problematic in relation to metering, given metering's enabling function from an electricity pricing perspective. As explained above, the meter which 'best suits the needs' of the individual customer is likely to be contrary to the interests of customers as a whole. • If customers can choose a Type 6 (accumulation meter), this will have the effect of limiting pricing flexibility, innovation and DSP opportunities in the future. For example, if the end-point for DNSPs from a pricing perspective is a tariff with a fixed charge and a marginal price component that reflects the economic cost of supplying network capacity, it means that the retailers can no longer piggy back on the network tariff structure to set their retail component prices – i.e. they need to make their own decisions on how to structure the

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		energy charge component of the bundled bill to end-customers. This will be difficult to design in the absence of interval data and will stifle innovation by retailers in the pricing space. • Regardless, given the current NER restriction on customers reverting to a Type 6 installation from a Type 5 installation, and the direction taken by the AEMC in its Power of Choice review in recognising the importance of interval metering as a necessary vehicle for cost-reflective pricing and DSP, the DNSPs' view is that customer choice should not extend to Type 6 metering.
3.1	The AER considers that the following component services make up metering services: • meter provision – the capital cost of purchasing the metering equipment • meter installation – on-site meter connection at a customer's premises • meter maintenance – works to inspect, test, maintain and repair meters • meter reading – quarterly or other regular meter reading • energy data services (meaning metering data services under the NER – but excluding meter reading))	Under the NER: • 'meter provider services' involve providing, installing and maintaining types 5-7 meters; and • 'metering data provider services' comprise collecting metering data from each metering installation for the which the LNSP is responsible, the processing of that data and the delivery of the processed data to the metering database and to parties entitled to that data under Rule 7.7(a), except as otherwise specified in clause 7.2.1A(a). We note that under the AER's proposal: • the component services expressed to make up metering services do not cover all services comprising metering services undertaken by the DNSPs in their responsible person role. For example, as mentioned above 'meter provision services are not just the capital cost of purchasing metering equipment. As mentioned in Network NSW's response to the AER's Preliminary Framework and Approach paper, they also include procurement activities, meter testing, quality control, logistics and contract management activities, testing of meter products to ensure compliance with regulatory and contractual requirements and logistics associated with forecasting, ordering, storing, distributing and tracking meters. • the effect of the AER's proposed classification is that 'meter provision' for classification purposes would not be consistent with the definition of meter provider services in the NER. Similarly, given that the proposed classifications excise meter reading services from meter data provider services as defined in the NER, this means that two different service classifications would apply to the one service (meter data services) as defined in the NER.
3.3.1	The provision, maintenance and reading of types 5	• Maintenance services are part of the DNSPs' asset maintenance framework. They do not relate to specific customers, but rather to populations of aged meters. Replacement of these

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	and 6 services to be classified as alternative control services….the AER considers that NSW DNSPs can directly attribute the costs of providing these services to the customers that use them. Therefore, the NSW DNSPs can avoid the costs of providing these services if a customer switches from a type 5 or type 6 meter to a type 4 meter, or chooses a different metering provider.	meters is for regulatory compliance and risk management purposes and services are not provided at the customer's request. As long as the DNSP is responsible for metering assets, it will need to manage the maintenance aspects of those meters. As mentioned in our response to the AER's Preliminary Framework and Approach Paper, we do not consider there to be a sufficient nexus between meter maintenance services and individual customers to justify attributing these costs to individual customers. • For meters owned and maintained by third parties, the DNSP obviously does not incur meter provision or maintenance costs in relation to those particular customers. In order to extract these costs from network charges paid by those customers, we would need to understand better the form of control to be applied to metering maintenance and provision services and how the charging process is to work. • Please clarify how the AER is intending to treat the special meter testing and other meter-related activities carried out by the DNSPs and currently classified as 'miscellaneous services'?
3.3.2	The AER considers that it should not classify, and therefore, not regulate, meter installation services for Types 5 and 6 meters.	We assume this refers to meter installation services that are provided contestably. In NSW, meter installations for new meters and upgrades are provided contestably. Meter maintenance services conducted as part of the meter replacement program are performed by the DNSPs and involve meter installation. Presumably, meter installation carried out by the DNSPs as part of meter maintenance, or because installation work is not available to be provided contestably (e.g. CT installation work) will not be unclassified.

Attachment C

Metering installation definitions

The type of metering installation in the National Electricity Market (NEM) is generally determined by the annual energy consumption through the connection point. The table below describes Types 1-7 metering installations.

Meter Type	Annual consumption	Characteristics/functionality	AER description	Comments
Type 7 installation (unmetered supply)	Unmetered			
Type 6 installation (accumulation meter)	<100MWh	Records accumulated consumption data on a periodic basis (typically three month periods to match billing cycle). This data provides consumers with their total historical consumption; however does not provide timing of energy use (either how much and when electricity is used). The data is retrieved manually from the meter at a customer's premises. In the past, these have been electromechanical but now are increasingly electronic meters. Total kWh register is manually read on-site by a meter reader.	For customers that use less than 160MWh per annum.	Note that in NSW, the relevant threshold is 100MWh per annum
Type 5 installation (interval meter)	<160MWh	Records consumption on a near real time interval basis (i.e. half hourly consumption). This information provides consumers with the timing of their current consumption data for a time period. Type 5 meters range in functionality, with incremental price differences between the various meter types and suppliers. Functionality in the majority of entry level meters includes time switch (or similar) load control capability and a communications upgrade path to support future remote retrieval of interval data. Type 5 meters are manually read (30 min load profile data is		

Meter Type	Annual consumption	Characteristics/functionality	AER description	Comments
		probe read on-site by a meter reader).		
Types 1- 4 installations (interval meters)	Type 1: >1000 GWh Type 2: 100 - 1000 GWh Type 3: 0.75 - <100 GWh Type 4: <750MWh - >160MWh	Types 1-4 installations have communications devices connected to them and are read remotely. These are metered using interval (Type 5) meters with remote acquisition capability	Meters that are not otherwise Type 5 or 6 meters and include 'smart' meters with remote communication capabilities	From a functionality perspective, Types 1-4 installations use interval meters (i.e. same as Type 5) with remote communications. They are not the full AMI-type meters usually referred to as 'smart meters' (see definition of smart meters below based on the definition used by the AEMC in its Power of Choice review).
Smart meter (AMI-type meters)		Records consumption on a near real time interval basis (i.e. half hourly consumption). Smart meters have communication technology that enables data to be retrieved remotely, provides other smart services. e.g., network support (faults/problems on network, load management), and can link to devices (i.e. through HAN and IHD) that enable instant access to electricity use profile.		Smart meters have not yet been separately classified from Type 4. Under a strict interpretation of the NER, a meter with remote acquisition through a public telecommunications network is a Type 4 meter. Note that in Victoria, there is a derogation for the smart meters they are rolling out so they can continue to be classified as a Type 5 or 6 metering installations (see clause 9.9B.4 of the NER).