28 October 2021

Alisa Toomey
Australian Energy Market Commission (AEMC)
GPO Box 2603
Sydney NSW 2000

Dear Ms Toomey

AEMC DIRECTIONS PAPER: REVIEW OF THE REGULATORY FRAMEWORK FOR METERING SERVICES (EMO0040)

Endeavour Energy appreciates the opportunity to provide this response to the AEMC's Directions Paper (the paper) on the *Review of the regulatory framework for metering services*. We welcome the AEMC acknowledging that the *Competition in metering services* rule change has not met expectations and agree that a combination of incremental and more substantial reforms are required to improve the efficiency and effectiveness of the regulatory framework for metering services.

The paper identifies the slow pace at which the smart meter roll out is occurring and inefficient arrangements for negotiating access to smart meter data as the two key shortcomings of the current framework. A range of credible options are then identified to accelerate the smart meter roll out and potential models from which a data access and exchange framework could be based.

As widespread deployment of smart metering is a key enabler of the transformation and digitalisation of the energy system, we support initiatives that will deliver – with improved certainty – a higher penetration of smart meters in a timely manner. In our view, this would best be achieved through introducing smart meter installation targets that are set to achieve market-wide penetration by 2030. Notably, metering targets have been adopted in the UK and within the NEM through the Tasmanian Government's recent commitment for full smart meter deployment by 2026.

We also consider a new data access and exchange framework should be established in parallel with an accelerated meter roll out to fully unlock the benefits of smart metering and deliver improved customer outcomes. From a DNSP perspective, unhindered and on-demand access to power quality data from smart meters is critical to manage increasing numbers of customers connecting DER to the network and to comply with new obligations to consider the limitations for export services as part of efficient network planning and investment decisions.

We support a solution which mandates the timely provision of basic power quality data in a standardised format and consider this could be achieved by combining elements of the minimum content requirements and exchange architecture models. This would balance the certainty from access to a prescribed set of 'basic' smart meter data whilst providing flexibility for Metering Coordinators (MCs) to negotiate with DNSPs and other parties for access to more discretionary but less critical data on commercial terms.

Our detailed feedback on the options to accelerate the meter roll out and to inform a new data access framework are provided in Appendix A. Our response to the questions in paper is provided in Appendix B. If you have any queries or wish to discuss our submission further please contact Joe Romiti, Regulatory Analyst on (02) 9853 6232 or via email at joseph.romiti@endeavourenergy.com.au

Yours sincerely,

Colin Crisafulli
Manager Network Regulation

Appendix A: Endeavour Energy's feedback on options to improve the smart meter roll out and models for a data access and exchange framework

1. Accelerating the smart meter roll out

The paper recognises that the slow smart meter roll out is largely due to the smaller than expected rate of retailer-led smart meter installs and that this needs to be accelerated to achieve higher penetration rates to allow a range of customer and system benefits to be realised. The AEMC suggests that split incentives could be deterring retailers from proactively installing meters and the paper outlines a range of options to stimulate a faster roll out[1]. These include:

- Setting retailers an annual smart meter installation target
- Introducing a 'backstop' date to achieve a specified smart meter penetration level
- Requiring meters to be replaced with smart meters once they reach a certain age
- Providing retailers with additional revenue streams and spreading the cost of installation
- Allowing multiple parties to be responsible for metering

The current rate at which retailers are installing meters is delaying a range of customer and system benefits that relies on a higher proportion of connections to be monitored via smart meters. Without action, market-wide smart meter penetration may not be achieved until after 2040. Therefore, we are supportive of measures to accelerate smart metering installations and consider this could most effectively be achieved through a target setting approach. Our views on each option is discussed below.

Setting smart meter installation targets and 'backstop' dates

Under this approach, retailers would be set annual targets to have a certain proportion of their customer base supplied through smart metering. This could work in conjunction with a 'backstop' date to achieve a certain and consistent penetration level of smart meters in all jurisdictions. This may result in individual retailers being set different target rates to which they can use their discretion in deciding how they will achieve the targets.

Coupled with an appropriate enforcement regime, binding targets provides certainty to metering service providers and allows them to plan and prepare their workload and resourcing to align with the roll out requirement. It also sends an investment signal to service providers that products and service offerings will be supported by requisite numbers of smart metered customers.

We note that this approach will soon apply in the UK whereby individual retailers are set specific installation targets with the aim to deliver market-wide coverage by 31 December 2025. Notably, a retailer's target will be set as a proportion of its overall consumer base to ensure that the task facing each retailer will be commensurate to its size with the costs of the smart meter roll out continuing to be incurred predominantly by retailers. Also, the Tasmanian Government recently committed to the acceleration of advanced meters across the state, with the aim of reaching full deployment by 2026.

These recent and relevant case studies demonstrate the merits of a target-based approach and we would support an equivalent framework for other NEM jurisdictions and suggest 2030 as an appropriate 'backstop' date to achieve complete market-wide coverage. This would support the ESB's Post-2025 market design reforms which rely on smart meter infrastructure and facilitate compliance to any new obligations and expectations that arise from these reforms.

Aged-based replacement of accumulation meters with smart meters

As per the installation target approach, this involves replacing an accumulation meter before the end of its economic life but with the replacement triggered once it has reached a certain age. Where replacing

[1] The split incentives issue arises where the benefits from installing smart meters are shared across multiple parties but the costs of installing them are allocated to a single party.

several co-located meters of different ages is efficient and can reduce the average per cost of installation, we believe the framework should provide retailers and MCs the flexibility to do so.

However, replacing meters before the end of their standard economic life will affect how the residual capital costs are recovered. For instance, replacing a meter with an economic life of 35 years after only 25 years would slightly accelerate the rate at which these costs are recovered through depreciation. However, replacement after 25 years may not facilitate a timely market-wide roll out and a lower age trigger may be preferable which in turn further reduces the time in which residual capital costs can be recovered from customers.

The impact of altered depreciation profiles needs to be balanced against achieving a sufficiently high market-wide smart meter penetration rate when determining an appropriate replacement age. Whilst accelerated depreciation is a tool DNSPs can use to manage the introduction of an age-based replacement or mandated target approach, it temporarily increases pressure on network metering charges and requires the AER's approval.

With several DNSPs (including Endeavour Energy) due to submit their proposals for the 2024-29 regulatory control period to the AER in January 2023, it is important the AEMC provide a clear policy direction on a mandated expedited roll out so DNSPs can consider and consult with their customers and stakeholders on the use of accelerated depreciation for accumulation meters. This is critical in the event either a target or age-based approached is used in conjunction with a 2030 'backstop' date, as virtually all the residual value of in service accumulation meters would be depreciated during the 2024-29 regulatory control period.

Additional retailer revenue streams and spreading the cost of installation

On the issue of split incentives, the AEMC discusses options to ease the cost burden on retailers by sharing the installation costs with beneficiaries including as DNSPs. This could be through a direct contribution to the cost of the meter or paying for data access or to deliver a higher penetration of smart meters across its network, or in specific areas for greater visibility.[2]

We consider the extent to which cost sharing will stimulate retailers to install meters is unclear and hold strong reservations about the efficiency and efficacy of this approach. In our view, competition between retailers should continue to underpin the incentives that retailers have to roll out smart meters. Sharing the installation costs of a retailer-led roll out introduces significant complexities related to efficient pricing, cost allocation and cost recovery. Some of these are identified in the paper[3] and may be further complicated if a customer elects to change their retailer.

Whilst customers, retailers and DNSPs are the most recognisable beneficiaries of the services enabled by a wider smart meter roll out, they do not benefit equally. We believe customers and retailers are the predominant beneficiaries of smart meters and consider the network benefits will ultimately accrue to customers in the form of a better managed and lower cost network.

This skewing of benefits to customers and retailers was confirmed in a cost benefit study for the smart metering implementation program in the UK[4]. We do not consider the NEM is sufficiently different to suggest this is not also the case in Australia and that cost contributions from DNSPs are justified.

Furthermore, cost sharing offers no obvious cost savings as costs reallocated to DNSPs would be included in the network charges paid by retailers. Rather, it is likely that allocating costs to more parties would increase the average meter installation cost through lost synergies, additional coordination costs and weakened incentive for retailers to negotiate efficient prices from competitive metering service providers which DNSPs have little opportunity to influence.

In general, an accelerated roll out is less certain to be achieved under the proposed cost sharing arrangements. Nevertheless, there may be situations where DNSPs could play a more active role in

[2] AEMC, Review of the regulatory framework for metering services, Directions paper, 16 September 2021, p.53
[3] Ibid, p.53
[4] Department for Business, Energy & Industrial Strategy, Smart meter roll-out: cost-benefit analysis 2019, September 2019, p.63

facilitating meter installation such as where installing smart meters is an efficient non-network alternative to more costly network investment.

Our recent success in developing an efficient non-network solution that involved the targeted deployment of smart meters demonstrates this is a scalable and repeatable use case that can deliver cost saving benefits to customers.[5] However, navigating the regulatory framework proved challenging and required multiple correspondence with the AER to gain 'no enforcement action' assurances before the project was committed to.

Multiple parties responsible for metering

Under this option, where network benefits are derived from smart meters being installed in a particular premise or area, DNSPs could voluntarily bear the cost and responsibility for the roll out. This option has the distinct advantage of reducing the effort, costs and risk of poor customer outcomes associated with coordinating multiple parties to install a meter that is commonly encountered under the current framework.

From a network perspective it would enable DNSPs to proactively install meters to improve Low Voltage (LV) network visibility, unencumbered by restrictions that would typically prevent, delay or add cost to the installation. Given MCs may be incentivised to prioritise installing meters at low cost-to-install premises, this approach would also provide DNSPs with an opportunity to deliver a more equitable roll out by installing meters in high value (and high cost-to-install) locations such as rural and remote locations.

However, this approach represents a partial unwinding of roles and responsibilities established under the metering contestability reforms and DNSPs may not be appropriately resourced, have an ability to cost recover, or an appetite to be responsible for the metering installation on an ongoing basis. Also, different arrangements across metering points may contribute to confusion and complexities relating to access arrangements. If these complexities can be managed, we consider this option can facilitate a market-wide roll out and support exploring this option further.

2. Introducing a data access and exchange framework

To effectively manage and plan for the increasing penetration of DER connecting to the distribution network, DNSPs require enhanced visibility of the LV network. With new obligations and expectations on DNSPs to facilitate the integration of DER and to enable more customers to realise a greater range of benefits from their DER investment, access to power quality data is critical in allowing DNSPs to operate their networks more dynamically[6].

Victorian DNSPs are already well placed to manage the increasing levels of DER by virtue of their ability to access data at no cost, on-demand and unhindered by third-parties. In contrast, non-Victorian DNSPs face significant challenges in accessing the same data and where access can be negotiated, requires substantial evidence (typically in the form of a business case) to demonstrate to the AER that the costs to access the data is prudent and efficient.

As a consequence of the separation of smart metering services from monopoly distribution services, some of the challenges facing non-Victorian DNSPs include:

- The need to negotiate access with multiple MCs to attain a sufficient level of visibility
- Prohibitive access charges set significantly above the incremental cost of providing the service (plus a reasonable commercial margin)
- Lack of an agreed standardised format for data to be provided

[5] This refers to our Albion Park Zone Substation Load Control Replacement Program. Further details on this project can be found on the AER's website or here.

[6] For instance, the AEMC's Access, pricing and incentive arrangements for DER final rule introduces new obligations for DNSPs to provide customers a minimum DER export service. Also, the ESB post-2025 market design recommendations recognise that greater visibility of the network is required for DNSPs to operate the distribution network more dynamically as part of their DSO functions.

- Regulatory and commercial barriers which deter MCs from providing access to DNSPs

These barriers to data access are noted by NERA who acknowledge that transaction costs and the incentive for MCs to withhold access are the main reasons for there being very little exchange of data between MCs and DNSPs.[7]

Whilst the framework allows DNSPs to access power quality data by installing network devices, this encourages duplication of costs and metering infrastructure and would be inefficient as the data can typically be accessed more efficiently through smart meters. Further, the relatively high cost of installing, operating and maintaining a network device means the bypass risk to MCs is low and networks do not have any effective counter-veiling bargaining power. Consequently, we have largely refrained from installing network devices and have not reached commercially reasonable agreements with MCs.

To address these challenges, the AEMC has outlined four potential data access framework options in the paper, including:

- A centralised organisation that would hold all metering data
- A 'minimum contents requirement' approach that provides DNSPs with free access to 'basic' power quality data
- An exchange architecture with a standardised platform for meter data transactions
- A negotiate-arbitrate framework

We agree with the AEMC that current arrangements for negotiating and utilising data that the meter can provide are inefficient and not likely to be contributing to the long-term interest of consumers[8]. We consider a formal data access and exchange framework should be prioritised and progressed alongside measures to accelerate the smart meter rollout. Our views on each of the AEMC's options is provided below.

Establishing a centralised organisation

Based on the UK's Data Communications Company (DCC), a centralised authority to administer data access and sharing would effectively act as the sole MDP in the NEM. The organisation would allow all interested parties access to smart meter data at no charge and prevent the ability of metering parties to exert their monopoly power and withhold access.

This approach would resolve issues around DNSPs having to negotiate with multiple MCs for data access or the costs involved in processing data that is received in different formats. Since AEMO currently handle metering consumption data our assumption would be that they would be well placed to assume this role.

However, any model based on arrangements in the UK – where data is captured in 30-minute intervals and collected monthly – would need to allow DNSPs unhindered access to data streams measured at more frequent intervals to be fit-for-purpose in the NEM. This may not be possible whenever there is an intermediary between the MC and DNSP.

Furthermore, a central store to manage all smart meter data and provide near real-time access would require high levels of bandwidth and high-quality storage capabilities. The costs to a single entity to manage such large volume of data could be very high.

We also expect embedding a DCC-type organisation in the NEM would be costly and require significant industry effort and consultation prior to making the required regulatory and/or legislative changes to implement the new arrangements. A detailed and NEM specific cost-benefit analysis would be integral to considering the feasibility of this option. Also, the issue of data access is a pressing one with a practicable solution required sooner rather than later.

[7] NERA Economic Consulting, Smart Meter Data Access Framework Options, 13 August 2021, p. 5-9
[8] AEMC, Review of the regulatory framework for metering services, Directions paper, 16 September 2021, p. 30

Minimum contents requirement

Based on arrangements in New Zealand, this model would require MCs to provide DNSPs access to specified 'basic' power quality data and allow for access to additional or more frequent data to be negotiated. This reflects a tiered approach proposed by South Australia Power Networks whereby data classified under the first tier is provided to DNSPs free of charge, while the other two tiers are not mandated.

Mandating the provision of certain types of power quality data would address many of the access issues currently encountered (e.g. 'hold-out' challenges, multiple negotiations, complexities with retailer transfer) and deliver most of the benefits of the centralised organisation model. In addition, it could facilitate more frequent and faster access to power quality data and as no new entities or roles are required it is likely easier to implement than the centralised organisation approach.

Of all options considered, this approach could deliver the most benefits at lowest cost and could be applied in conjunction with the exchange architecture option to ensure mandated and negotiated data could be accessed in near real-time and in a consistent or prescribed format.

Deciding on what measures are included within the 'basic' tier and the terms on which access should be provided will need to be considered further. To guide the selection, we support the ENA's proposed definition of 'basic' data, which is 'instantaneous 5-minute readings of voltage, current, real and reactive power per phase provided to DNSPs at least every 24 hours.'

We consider there are reasonable grounds to require basic power quality data be provided to DNSPs on the same terms as consumption and billing data (e.g. in a standardised format, no charge) to reflect the criticality of this data in enabling networks to dynamically manage two-way energy flows and obligations to better integrate customer owned DER.

However, we appreciate providing access to power quality data is not a costless activity and if DNSPs are required to pay for access to basic power quality data, this should be provided at a price which reflects the incremental cost of providing the data plus a reasonable margin. A form of regulated pricing control will need to apply however we are uncertain whether the AER has the information gathering powers to compel MCs to reveal their costs to inform an efficient benchmark access charge or pricing mechanism.

Exchange architecture

In an exchange architecture option, DNSPs and MCs would interact with each other and transfer data through a pre-defined communications structure (e.g. B2B, API) and with partially defined contracts, but without a prescriptive list of what must be provided at what price[9].

The main concern we have regarding this option is that it doesn't introduce obligations to provide access to data or look to regulate access charges. Rather, it relies on DNSPs and MCs negotiating a commercial agreement on data access and makes participation in such negotiations optional. We consider the non-obligatory nature of the data exchange is not sufficiently different to the existing arrangements and that the current data access challenges would likely endure under this approach

Nevertheless, we see merit in developing a communication interface to enable the upload and download of smart meter data to a standardised format that would reduce transaction and processing costs. As mentioned previously, an exchange architecture model could work in tandem with the minimum content requirements model to ensure all types or tiers of metering data, either mandated or negotiated, is exchanged between parties in a consistent format.

Negotiate-Arbitrate

Based on gas pipeline access arrangements in Australia, a 'negotiate-arbitrate' framework provides recourse to arbitration in the event negotiation between the DNSP and MC or retailer breaks down. Of

[9] NERA Economic Consulting, Smart Meter Data Access Framework Options, 13 August 2021, p. 26

all the options considered, it is the least prescriptive with arbitrators given a set of principles to follow when making a decision[10].

We note that negotiate-arbitrate frameworks are notorious for, in many cases, requiring considerable time to reach a point of resolution. Also, because it is governed by principles rather than prescription, we consider that as a standalone option it does not provide the certainty of outcomes offered by other options.

A negotiate-arbitrate framework could potentially be used in conjunction with a minimum content requirements/exchange architecture model as a backstop where negotiation for access to discretionary non-basic data fails. However, parties would need to be confident that matters could be resolved quickly and at low cost and effort for this to be valued.

[10] Ibid, p.28

Appendix B: Endeavour Energy's response to questions in the Directions Paper

QUESTION 1: BENEFITS WHICH CAN BE ENABLED BY SMART METERS

(a) Are there other benefits which can be enabled by smart meters that are important to include in developing policy under the Review?

Through their data capture and connectivity capabilities, smart meters are the primary enabler of a modern grid and can unlock a range of benefits. Whilst these benefits are shared across the entire electricity supply chain, they ultimately accrue to customers typically in the form of greater choice, improved service quality and lower net energy costs.

The list of benefits in section 2.2. of the paper is extensive and we expect further benefits to be revealed over time as more innovative energy services, products and markets emerge. In addition to those identified in the paper, smart meters allow DNSPs to better detect non-technical losses (e.g. energy theft detection) and connections made without approval.

(b) What are stakeholders views on alternative devices enabling benefits? What are the pros and cons of these alternative devices?

In contrast to meters, customers generally have discretion to install and use alternative devices (e.g. home energy management systems) with their adoption largely dependent on a customer's desire to benefit from a specific service or product offering. These devices typically have a narrow and defined application and generally don't offer the same broad and standardised capabilities as smart meters. Their high cost relative to smart meters is also a significant barrier to their widespread take up meaning they would better complement rather than be a substitute to smart meters.

Without consistent or mandatory minimum requirements governing their operation, information capture/sharing and interoperability capabilities, alternative devices would not likely provide DNSPs with better visibility of the LV network. It would be inefficient to establish new operational and technical frameworks relating to these privately owned devices when greater benefits could be achieved with less cost and risk to innovation through relatively minor changes to the existing metering framework.

DNSPs can attain improved visibility of LV network via network devices but this remains a sub-optimal alternative to installing smart meters in most cases. In a well-functioning metering framework, there would be little need for smart meter bypass threats to facilitate access to smart meter data. In the absence of a fit-for-purpose data access framework, this provision – whilst somewhat ineffective in improving access to smart metering data to date – provides networks with an important (and often only) avenue to access valuable LV and power quality data.

QUESTION 2: PENETRATION OF SMART METERS REQUIRED TO REALISE BENEFITS

(a) Do stakeholders agree that a higher penetration of smart meters is likely required to more fully realise the benefits of smart meters? If so, why? If no, why not?

Whilst benefits can be realised at current penetration levels, we agree the full range of benefits from smart metering can only be realised at higher penetration levels. At these levels, service providers would be more enticed to provide new and innovative tariffs and services (including non-network or demand management solutions) with the confidence there is sufficient depth in the market to support their product or service offering.

From a network perspective, instances where the value of benefits correlate with penetration rates include:

- Type 6 meter reading: This service represents a significant cost which to date has not fallen in proportion to the take up in smart meters. This is because where installation has been sporadic (in a geographic sense) logistical effort and field activities remain largely unaffected. Cost reductions can be realised when accumulation meters are replaced en mass in specific

locations (at a street, neighbourhood, suburb level) with additional benefits available if targeted where network constraints exist.

- Load profiling LV networks: Whilst DNSPs can install LV monitoring devices on distribution substations, this has historically been a cost-prohibitive and reactive exercise. With high penetration of smart meters, detailed loading profiles can be derived, improving thermal and electrical modelling which better inform efficient asset replacement and augmentation programs.
- LV monitoring: Through investment in information systems and analytics, DNSPs can unlock benefits by building 'smart' capabilities to act on real-time consumption and power quality data (e.g. initiate a field crew visit automatically when a fault is detected). However, advanced systems will likely need to operate in parallel with equivalent existing systems until it is appropriate, from a safety and service perspective, to retire legacy systems.

(b) Do stakeholders have any feedback on the level of smart meter penetration required for specific benefits? Or to optimise all benefits?

We agree with approximated penetration levels required to realise network benefits outlined in Table 2.2 of the paper.

QUESTION 3: TO REACH A CRITICAL MASS IN A TIMELY MANNER, OPTIONS TO ACCELERATE THE ROLL OUT SHOULD BE CONSIDERED

(a) Do you consider that the roll out of smart meters should be accelerated? Please provide details of why or why not.

The current metering framework is not delivering the expected services and customer benefits it was expected to. Whilst AEMC rules and jurisdictional processes have since been made to improve customer metering outcomes, without more substantial reform the framework will continue to stifle innovation and delay valued services. Also, network obligations on providing export services and managing increasingly complex two-way energy flows requires visibility at the LV level that can most efficiently be provided by smart meters.

We agree that a faster roll out is in the long-term interest of customers by allowing the various benefits that ultimately accrue to them to be realised sooner. It is important that an accelerated rollout deliver the critical mass of smart meters required to enable the ESB's Post-2025 Market Design reforms to progress as planned under the DER Implementation Plan and to facilitate the transition to a two-sided market.

However, an accelerated smart meter rollout needs to be coupled with a fit-for-purpose metering data access arrangements for the benefits from achieving a critical mass to be realised to their full extent.

(b) What are the merits, costs and benefits of each option? Is there a particular option which would be most appropriate in providing a timely, cost effective, safe and equitable roll out of smart meters?

Setting retailers binding annual rollout targets would be effective in achieving a desired smart meter penetration level by a defined 'backstop' date and allow benefits to flow through to customers sooner.

This target setting approach will soon apply in the UK (where coverage is estimated to be 49% by December 2021) with each retailer set specific targets which aim to deliver 100% coverage by 31 December 2025. Notably, a retailer's target will be set as a proportion of its overall consumer base to ensure that the task facing each retailer will be commensurate to its size with the costs of the smart meter roll out continuing to be incurred predominantly by retailers.

We would support further consideration of applying an equivalent framework for the NEM and suggest 2030 as an appropriate 'backstop' date to support the ESB's Post-2025 market design reforms and facilitate compliance to any new obligations or expectations that arise from these reforms.

However, any expedited smart meter roll out requires the cost recovery arrangements for legacy accumulation meters to be considered. Specifically, replacing these meters prior to their estimated economic life could result in smart metered customers also paying for the residual costs of meters that are no longer in service.

An aged-based roll out could better allow replacements to more closely match existing depreciation profiles but requiring a meter to be replaced after 20 or 30 years may not facilitate a timely market-wide take up. Alternatively, DNSPs could propose revised depreciation rates (i.e. accelerated depreciation) to match the determined aged-based replacement schedules or to recover all costs by the 'backstop' date under the target-based approach. It may be worthwhile to consider adding a geographic or housing type element to any target or age-based replacement to ensure high cost-to-replace customers can also share in the benefits. Coordinating replacements with meter read routes would also allow cost savings from this costly field service to be realised sooner.

With several DNSPs developing their 2024-29 regulatory proposals, it would be an opportune time to investigate the use of accelerated depreciation as a tool to manage the cost impact of any accelerated roll out. However, a policy position on an expedited roll out would need to be reached soon so DNSPs have an opportunity to consider and discuss the implications with customers and stakeholders.

(c) How would each of these options for rolling out smart meters impact the cost profiles of smart meters?

Further to the accumulation meter cost recovery issue discussed in 3(b), any retailer-imposed target or aged-based replacement requirement would need to consider the availability of meters and capacity of metering parties to deliver the desired roll out rate. If set too aggressively/soon, metering assets could be difficult to obtain and more expensive to procure.

Also, our backlog of 17,000 family failure meters that has built up since 2017 suggests metering parties are already under-resourced and without a substantial uplift in qualified installation and support staff, a mandate could impact the cost and timeliness of meter installs.

(d) Are there other options that you consider would better provide a timely, cost effective, safe and equitable roll out of smart meters?

No response.

QUESTION 4: OPTIONS TO ASSIST IN ALIGNING INCENTIVES

(a) What are the costs and benefits of each option? Is there a particular option which would best align incentives for stakeholders?

We hold strong reservations about any arrangements for DNSPs to contribute to the cost of installing meters to stimulate a retailer-led roll out and consider competition between retailers should continue to underpin the incentives that retailers have to roll out smart meters. Sharing the installation costs of a retailer-led roll out introduces significant complexities related to efficient pricing, cost allocation and cost recovery.

The ability of DNSPs to fund their share of any smart metering costs is a particular area of concern as these would need to be forecast years in advance and approved by the AER. Forecasting error and uncertain regulatory treatment of these costs could restrict a DNSPs ability to recover efficient costs which contrasts with the flexibility retailers and metering parties have as unregulated entities in passing on any of their incurred costs to their customers.

From a customer perspective, a cost sharing approach offers no cost savings as costs reallocated to a DNSPs would ultimately be passed through to retailers. Rather, allocating costs to more parties would increase the average meter installation cost through lost synergies, additional coordination costs and weakened incentives for retailers to negotiate efficient prices from competitive metering service providers (to which DNSPs have little opportunity to influence). As a general principle, we believe costs should be attributed to the parties best placed to influence or control them.

Nevertheless, there may be situations where DNSPs could play a more active role in facilitating meter installation such as where installing smart meters is an efficient non-network alternative to more costly network investment or the need for visibility is pressing (e.g. high bushfire risk locations). Our recent success in collaborating with an MC on developing a non-network solution that involved the targeted deployment of smart meters demonstrates this is a scalable and repeatable use case that can deliver benefits to customers. However, navigating the regulatory framework proved challenging and required multiple correspondence with the AER to gain 'no action' assurances before the project was committed to. Allowing DNSPs the opportunity to elect to bear the cost and responsibility for installing meters in certain circumstances would be a more streamlined and less burdensome alternative.

The extent to which DNSPs will engage with MCs for metering-based non-network solutions may also be limited by the introduction of any roll out target regime. Where retailers are set meter installation targets to achieve a relatively quick market-wide roll out (as per the UK), DNSPs will face a reduced need for a targeted installation solution. Also, jurisdictional policy may influence the feasibility of any additional revenue streams to MCs if roll out targets like that which has recently been introduced in Tasmania are adopted by other state and territory governments.

An approach where multiple parties could be responsible for metering could be workable and in the interests of customers. However, different arrangements across metering points lends itself to confusion and complexity relating to access arrangements. Also, this represents an unwinding of responsibilities introduced under Power of Choice for which DNSPs may not be adequately resourced, able to recover costs or willing to comply with ongoing obligations.

(b) Are there other options that you consider would better align incentives?

No response.

QUESTION 5: THE CURRENT MINIMUM SERVICE SPECIFICATIONS ENABLE THE REQUIRED SERVICES TO BE PROVIDED

(a) Do you agree with the Commission's preliminary position that the minimum service specification and physical requirements of the meter are sufficient? If not, what are the specific changes required?

From a network perspective, we consider smart meters generally have the functionality to capture (and transmit at sufficiently frequent intervals) data DNSPs could use as inputs into a variety of planning, operational, safety and pricing purposes. Whilst the minimum service specification is generally adequate, we consider there may be scope to expand it to allow the ability to manage devices (e.g. hot water, pool pumps, DER, EVs) connected under 'controlled load' arrangements.

We also support expanding the minimum service specification to include voltage measurement. We consider this to be a basic power quality metric that the ESB has identified as absent in the minimum service specification. In their Data Strategy, the ESB comment[11]:

> *Voltage measurement is currently not a mandated minimum standard service of a smart meter, though most smart meters being installed have that capability. However most smart meter data on voltage is not being used for a range of reasons and there are even DNSPs installing separate voltage meters to obtain similar data from a much smaller sample of customers.*

(b) Are there changes to the minimum service specifications, or elsewhere in Chapter 7 of the NER, required to enable new services and innovation?

We understand the purpose of the minimum service specifications is to ensure metering installations can provide a range of service beyond those that are valued by the MC, MP or retailer. However, there is no obligation on MCs to provide these services with DNSPs and other parties who are expected to

[11] ESB, Data Strategy, Final Recommendations, July 2021, p. 13

negotiate with MCs to access these services. As discussed in the paper, in practice there have been challenges to negotiating fair and commercial terms for some services.

Regarding metering data services, we note the NER allows parties with a financial interest in the energy being measured by the installation (which includes DNSPs) to access billing and consumption data at no charge. However, with new rules (e.g. Access, pricing and incentive arrangements for DER) and reforms (e.g. ESB Post-2025 Market Design) requiring DNSPs to accommodate more DER and manage the resulting impact on the network, access to power quality data has become critical to comply with our obligations and meet consumer and government expectations.

On this basis, we consider it reasonable to recognise the significance of power quality data through having the same 'on-demand' access provisions which currently apply to billing and consumption data also apply to a core subset of power quality data. DNSPs are quickly approaching (if not already reached) the point whereby frequent and unhindered access to power quality data is required and it is no longer appropriate to consider such data superfluous to providing core network functions and expect DNSPs to make numerous ad hoc requests to gain access.

However, we appreciate providing access to power quality data is not costless and if DNSPs are required to pay for access to basic power quality data, an efficient regulated access charge may need to be established.

(c) What is the most cost-effective way to support electrical safety outcomes, like neutral integrity? Would enabling data access for DNSPs or requiring smart meters to physically provide the service, such as via an alarm within the meter, achieve this?

We consider applying data analytics to smart meter data can just as effectively alert DNSPs to neutral integrity issues but without the added cost of installing modules in new and to existing meters or risks of undetected faulty modules.

However, this approach would rely on networks having appropriate visibility of the network at each connection point through unhindered access to real-time data.

(d) Do you agree smart meters provide the most efficient means for DNSPs to improve the visibility of their low voltage networks? Why, or why not? What would alternatives for network monitoring be, and would any of these alternatives be more efficient?

As an element every active connection is required to have, smart meters represent the most efficient and reliable means to improve visibility of LV networks. With more distributed generation connecting to the network, observing the behaviours of the LV network in close to real-time is critical in managing increasing complex and frequent two-way energy flows.

Smart meters have a range of functionalities which could improve LV monitoring and operation without impinging on other devices located in a metering board. Whilst some insights can be gained at relatively moderate smart meter penetrations levels (depending on their location, whether they are concentrated or dispersed across an area), LV visibility and smart meter penetration rates are generally correlated.

However, challenges in negotiating with multiple retailers and MCs to access power quality data is a barrier to LV visibility. As we noted in the response to 1(b), the NER allows DNSPs to install network devices where an agreement can't be reached but the total costs of accessing data via a network device is substantially higher than the incremental costs of accessing the same data through smart meters. Without competitive tension in the provision of metering data, there is little incentive for retailers and MCs to agree with DNSPs on an efficient cost-reflective price (plus reasonable margin) that is substantially lower than the network device alternative.

In other words, procuring power quality data is the lowest cost option for DNSPs to improve LV network visibility but the charges typically quoted for this data are not efficiently priced.

(e) Can smart meters be used to provide an effective solution to emerging system issues?

Smart meters are likely to have several applications beyond the distribution level. Whilst they provide data on a range of parameters at each connection, when this information can be used to control

generation and load of multiple connections in unison, they can help maintain the security and reliability of the system.

More selective load/generation shedding is one way that smart meters could more dynamically manage instances where system load and generation is unbalanced, with the potential to target specific loads or generation metered separately from the general consumption (as envisaged through flexible trading agreements) to address system issues and minimise customer inconvenience.

Smart meters may also have a role to play in facilitating DER orchestration particularly in relation to EVs where coordination with other loads will be required in the future to ensure EVs can be integrated into the system with minimal disruption to the system and customers.

QUESTION 6: ENABLING APPROPRIATE ACCESS TO DATA FROM METERS IS KEY TO UNLOCKING BENEFITS FOR CONSUMERS AND END USERS

(a) Do you agree there is a need to develop a framework for power quality data access and exchange? Why or why not?

We strongly agree the current arrangements for negotiating and utilising power quality data is inefficient and not likely to be contributing to the long-term interest of customers. This is consistent with the challenges we have experienced in negotiating access to power quality data.

A clear and robust framework for data access and exchange is required. Given negotiating access to power quality data has proven problematic, we consider regulation is required to address incentives that encourage data access being restricted and other perverse outcomes (e.g. duplicating costs and infrastructure where network devices are installed where accessing the data from a smart meter is denied or unjustifiably costly).

The need for a data access framework has become more pressing following the ESB's Post-2025 Market Design recommendations. DNSPs will have an important role in facilitating the transition towards a more decentralised and flexible two-sided market that seeks to encourage greater integration of DER. Power quality data is key to a lower cost and modern grid and a fair and efficient data access framework is required to ensure the ESB's planned transition is not stymied.

Victorian DNSPs are already well placed to manage this transition by virtue of their ability to access data at no cost, on-demand and unhindered by third-parties. Non-Victorian DNSPs face significant challenges in accessing the same data and where access can be negotiated, requires substantial evidence (typically in the form of a business case) to demonstrate to the AER that the costs paid to access the data was prudent and efficient. An effective data access and exchange framework would help to provide all NEM DNSPs with similar opportunities to access basic power quality data at a cost-reflective price.

(b) Besides DNSPs, which other market participants or third parties may reasonably require access to power quality data under an exchange framework? What are the use cases and benefits that access to this data can offer?

No response.

(c) Do you have any views on whether the provision of power quality data should be standardised? If so, what should the Commission take into consideration?

Consistent with our view that basic power quality data should be accessible to DNSPs on the same terms as billing and consumption data, we believe MCs should provide DNSPs with power quality data in a standard format defined in the NER or equivalent AEMO procedure.

We agree that the lack of an agreed common format is limiting the commercial exchange and scalability of power quality data use cases. Standardisation would reduce the costs associated with processing data from multiple metering data providers. It would facilitate faster data analysis and is more conducive to automated processes that would allow more dynamic system operation and control.

We also believe procedures to ensure data integrity should be developed to guide validation processes and substitution and estimation methodologies.

(d) Do you consider the current framework is meeting consumers' demand for energy data (billing and non-billing data), and if not, what changes would be required? Is there data that consumers would benefit from accessing that CDR will not enable?

The NER includes provisions which enable customers to access their consumption data via their retailers and DNSPs. Through retailers' websites and apps, customers can also readily access their consumption profiles and consider how this translates to their bill charges. We note the AER has commenced consultation on simplify energy bills to make them easier for consumers to understand and use.

Whilst not opposed to amending the NER to provide customers with improved access to their data (e.g. a common verification process, data standards that facilitate portability), we are unclear how much customers would value accessing their non-billing data given it pertains to technical metrics that do not typically impact their electricity costs and decisions. Consequently, the cost required to build a platform to provide access to this data may outweigh the benefits.

QUESTION 7: FEEDBACK ON THE INITIAL OPTIONS FOR DATA ACCESS THAT THE COMMISSION HAS PRESENTED

(a) What are the costs and benefits of a centralised organisation providing all metering data? Is there value in exploring this option further? (e.g. high prescription of data management).

A centralised authority to administer data access and sharing (effectively acting as the sole MDP) would avoid issues stemming from DNSPs and other interested parties having to negotiate with multiple MCs for data access or the costs involved in processing data that is received in different formats. Importantly, this model would allow access to power quality data at no charge and prevents the ability of metering parties to exert their monopoly-like control and withhold access. Since AEMO currently handle metering consumption data, AEMO (or an affiliate) would be the best placed organisation to handle all data.

Other benefits include:

- Higher levels of data security can be attained
- Improved data preservation
- Improved reliability and update speed (when delivered effectively at an enterprise-grade)
- Standardised data exchange with exchange participants

However, any model based on arrangements in the UK – where data is captured in 30-minute intervals and collected monthly – would need to allow DNSPs unhindered access to data streams measured at more frequent intervals (like Victorian DNSPs near real-time capabilities) for this model to be fit-for-purpose in the NEM. Although, this may not be possible whenever there is an intermediary between the MC and the data customer (e.g. DNSP).

Furthermore, a central store to manage all smart meter data and provide near real-time access would require high levels of bandwidth and high-quality storage capabilities. The costs of managing such large volume of data may be high and it may be more cost effective for the DNSP to store data.

We also expect embedding a DCC-type organisation in the NEM would be costly and require significant industry effort and consultation prior to making the required regulatory and/or legislative changes to implement the new arrangements. A detailed and NEM specific cost-benefit analysis would be integral to considering the feasibility of this option. Also, the issue of data access is a pressing one and a solution needs to reached sooner rather than later.

(b) What are the costs and benefits of minimum content requirements for contracts and agreements for data access to provide standardisation? Would such an approach address issues of negotiation, consistency, and price of data?

Our initial view is that of all options considered, this approach could improve data access outcomes at lowest cost. By mandating the provision of certain types of power quality data, MCs would no longer be able to withhold access and DNSPs would be less inclined to deploy duplicative network devices. Also, as no new entities or roles are required, this option is likely significantly cheaper and easier to implement than the centralised organisation approach.

Whilst this option conforms to our view that a core subset of power quality data should be available to DNSPs on the same terms as consumption and billing data (i.e. at no charge), if MCs are permitted to charge for providing access, price regulation for basic power quality data is required. There will also need to be some prescription on how data is transmitted and received to ensure mandated data could be accessed in near real-time and in a consistent or prescribed format. This could be achieved if implemented in conjunction with the exchange architecture model.

A tiered approach also provides the opportunity for DNSPs and MCs to negotiate access to more discretionary or non-basic data. Although there remains a risk that the current access challenges would continue for this data, MCs may be incentivised to reach an agreement to provide access to recoup costs associated with the obligatory service. It may be valuable to gain some understanding of the costs involved in providing a range of power quality measures. Along with the criticality of the measure and its relative importance in delivering network services, this could be used to inform allocations to a tier.

(c) What are the costs and benefits of developing an exchange architecture to minimise one-to-many interfaces and negotiations? Could B2B be utilised to serve this function? Is there value in exploring a new architecture such as an API-based hub and spoke model?

The main concern we have regarding this option is that it does not introduce obligations to provide access to data or regulate access charges. Rather, it relies on third parties (e.g. DNSPs) and MCs negotiating a commercial agreement on data access and makes participation in such negotiations optional. We consider the non-obligatory nature of the data exchange is not sufficiently different to the existing arrangements and that the current data access challenges would likely endure under this approach.

Nevertheless, we see merit in developing a communication interface to enable the upload/download of smart meter data to a standardised format that would reduce transaction and processing costs. A data exchange architecture could work in tandem with the minimum content requirements option to ensure all types/tiers of metering data, either mandated or negotiated, is exchanged between parties following a consistent format and common process.

We suspect significant updates would be required to enable B2B to transfer high volume of power quality data at near real-time speed. It may be more cost effective to purpose build new architecture (e.g. API-based hub and spoke model) that can handle the technical complexities and create a standard for market participants to be able to build their respective systems.

(d) What are the costs and benefits of a negotiate-arbitrate structure to enable data access for metering? Is there value in exploring this option further? (e.g. coverage tests or nonprescriptive pricing principles).

Negotiate-arbitrate frameworks are notorious for, in many cases, requiring considerable time to reach a point of resolution. Also, it is governed by principles rather than prescription and therefore we consider that as a standalone option it might not solve the issues of the current arrangements.

A negotiate-arbitrate framework could be used in conjunction with a minimum content requirements model as a backstop where negotiation for access to discretionary non-basic data fails. However, parties would need to be certain that matters could be resolved quickly and at low cost and effort for this to be valued.

(e) Are there any other specific options or components the Commission should consider?

We appreciate that providing access to power quality data is not a costless activity. For power quality data not critical for DNSPs to comply with their obligations (i.e. discretionary data), access charges could be either regulated or negotiated.

Under a regulated price cap, an efficient charge could be based on an efficient benchmark price. This may require MCs to reveal their commercial rates to the AER. However, the AER may not have the regulatory powers required to compel MCs to disclose this information.

We believe any efficient charge to access power quality data should not include the meter installation cost as the primary reason for the meter install is for market billing purposes. Rather, the incremental cost for providing the data (plus a reasonable margin) would be a reasonable basis for deriving an efficient access charge with optional data storage and processing services offering scope to charge a higher fee.

QUESTION 8: A HIGHER PENETRATION OF SMART METERS WILL ENABLE MORE SERVICES TO BE PROVIDED MORE EFFICIENTLY

(a) Are there other potential use cases that third parties can offer at different penetrations of smart meters? What else is required to enable these use cases?

No response.

(b) Noting recommendations in incentives and the roll out, are there other considerations for economies of scale in current and emerging service models?

No response.

QUESTION 9: IMPROVING CUSTOMERS' EXPERIENCE

(a) Do you have any feedback on the proposal to require retailers to provide information to their customers when a smart meter is being installed? Is the proposed information adequate, or should any changes be made?

We support the AEMC's proposal and suggest a standard information sheet that all retailers could adopt (potentially developed by the AEMC or AER) could help send a consistent and positive message of the benefits of smart metering to address some of the indifference or anxious sentiment felt by many customers.

In addition to notifying of any changes to the terms or conditions to the consumer's retail contract, retailers should also inform the customer of any impacts due to having a smart meter installed (e.g. the terms and conditions of the contract may allow for the billing period to change to monthly when a smart meter installed).

We also support the proposed measures to promote more efficient deployments of smart meters (e.g. limiting customer opt-out and reducing notification requirements for retailer-led roll outs) but these would need to be supplemented with a robust dispute resolution framework to manage any customer complaints.

(b) Should an independent party provide information on smart meters for customers? If so, how should this be implemented?

Having an independent third party provide customers with valuable information on smart meters provides less flexibility to retailers to tailor their communications to their customers but may achieve a more consistent message. Information from an independent third party, may provide customers with confidence that the information is not commercially driven or is marketing material that can be disregarded.

(c) Should retailers be required to install a smart meter when requested by a customer, for any reason? Are there any unintended consequences which may arise from such an approach?

We generally agree that customers should not be denied their request to have a smart meter installed. However, we recognise that complying with the proposed obligation in remote areas could be costly and may impact the competition for retail and metering services in high cost-to serve areas.

Given DNSPs generally have a more frequent field presence than metering service providers, it could be more efficient if MCs were permitted to engage DNSPs to install meters in remote areas. However, this solution should allow DNSPs the option to offer such a service to the MC. Certainty around cost recovery arrangements and the application of ring-fencing provisions would likely influence a DNSPs decision to offer this service.

QUESTION 10: REDUCING DELAYS IN METER REPLACEMENT

(a) Do you have any feedback on the proposed changes to the meter malfunction process?

We support the proposal to distinguish individual and family meter failures and consider the replacement timeframe appropriate. We also consider removing the ability for MCs to apply to AEMO for an exemption to the timeframe requirements in the NER essential to reducing delays.

Currently we have approximately 17,000 family failure meters that have been reported to retailers since 2017 and are yet to be replaced. Any transitional rules would also need to consider how these large replacement backlogs could be reduced.

(b) Are there any practicable mechanisms to address remediation issues that can prevent a smart meter from being installed?

We agree that the presence of asbestos, wiring defects and limited access within switchboards present challenges to a market wide roll out and need to be addressed to avoid customers under these scenarios being left behind. It is not likely affected customers would actively seek to have a smart meter installed if they are liable for the costs of remediation work and we have strong reservations about any obligations that would require them to fund such work to progress a retailer-led roll out.

Given the complexity of this issue, it may require the collective involvement of jurisdictional safety regulators and government bodies to investigate possible solutions. Whilst we recognise similar issues were encountered during the Victorian roll out, metering arrangements are quite different in Victoria than elsewhere in the NEM and a different workable solution may be required.

QUESTION 11: MEASURES THAT COULD SUPPORT MORE EFFICIENT DEPLOYMENT OF SMART METERS

(a) Do you have any feedback on the proposal to reduce the number of notices for retailer-led roll outs to one?

We are not certain of the extent to which the current requirements present a barrier to an efficient roll out but suspect reducing the number of notices represents an administrative cost saving, facilitates installation preparations and planning, and would trigger fewer customers to opt-out of the install. The benefits of this change may need to be reconsidered if opt-out provisions are tightened.

(b) What are your views on the opt-out provision for retailer-led roll outs? Should the opt-out provision be removed or retained, and why?

To the extent they present a barrier to smart meter deployment, we support the removal of the opt-out provisions. Roll out objectives and customer protections could be balanced if affected customers are given the opportunity to negotiate a different installation date or time and the customer has the option to maintain their existing retail tariff to the end of their contract.

(c) Are there solutions which you consider will help to simplify and improve meter replacement in multi-occupancy premises? Should a one-in-all-in approach be considered further?

Yes, we consider an all-in-one approach should be considered further.

Reduced customer outages, coordination effort and site visits are among the many advantages an all-in-process to replace meters could deliver relative to the current approach where meters are generally replaced on an ad hoc basis. Whilst the simultaneous replacement of all meters at a multi-occupancy site would be efficient and speed up the smart meter roll out, it is important that the rights and protections of each affected customer is not impinged in a way that results in a materially adverse customer outcome.

It is likely that an all-in-one option would need to be considered by various participants and a range of scenarios will need to be tested before a solution is agreed. Arrangements and processes to install meters in a shared-fuse multi-occupancy will likely vary from those in a conventional metering point and it will be important to consider how roles, responsibilities, customer protections and cost attribution and recovery will be impacted. These discussions should be progressed through Metering Reference and Sub-Reference Groups.

QUESTION 12: FEEDBACK ON OTHER INSTALLATION ISSUES

(a) Do you have feedback on any of the other installation issues raised by stakeholders? Are there any other installation issues the Commission should also consider?

It is appropriate for the market participant primarily responsible for interrupting supply to a customer(s) also be responsible for notifying the affected customers in advance of interruption. Whilst this currently falls to DNSPs in most shared fuse scenarios (where customers are supplied by different retailers), it may not be the case under a revised framework where the interruption and meter replacements are initiated and performed through a more collaborative process involving retailers and MCs.

QUESTION 13: IMPROVEMENTS TO ROLES AND RESPONSIBILITIES

(a) Are there any changes to roles and responsibilities that the Commission should consider under this review? If so, what are those changes, and what would be the benefit of those changes?

For a variety of reasons, issues on the metering board can prevent smart meters from being installed. As part of a customer's private installation, meter board remedial works are the responsibility of the customer. Where these costs exceed the benefits to the customers of having a smart meter installed (which is typically the case), this presents a challenge to achieving a market-wide smart meter roll out.

We note that there have been suggestions that DNSPs should be responsible for facilitating remediation behind the meter at customer sites. However, this work is contestable and DNSPs are prohibited from and not well placed to provide these services. We do not support the involvement of DNSPs in the rectification of issues.

We appreciate this is a complex issue and consider they may need to be resolved outside of the NER and NERR. For instance, jurisdictional government subsidies could provide customers (or retailers acting on their behalf) with a sufficient incentive to procure the requisite rectification service from qualified electrician or accredited metering technician.