



INTELLIHUB GROUP

SUBMISSION TO THE AEMC'S REVIEW OF THE REGULATORY FRAMEWORK FOR METERING SERVICES - DIRECTIONS PAPER

28 October 2021



Intellihub welcomes the AEMC's Directions Paper and the AEMC's support for an accelerated rollout of smart meters. An increased penetration of smart meters will help customers reduce their energy costs and access new technology and services, help distributors and AEMO integrate higher levels of DER and renewable generation, and improve reliability, system security and safety. A competitive metering market will deliver these benefits at the lowest cost. The AEMC's proposed reforms will accelerate the metering rollout and unlock the benefits of metering data and services.

Intellihub is a leading provider of electricity smart meter services and we have deployed over 1 million smart meters in Australia. We strongly support the AEMC's comments that 'smart meters are a key to enable a more connected, modern and efficient energy system that supports future technologies, services and innovation.'

We are seeing positive signs that the pace of the smart meter rollout is increasing. However, the current smart meter installation rate means that many customers and the broader energy system will continue to miss out on the benefits of smart meters unless the rollout is accelerated. We support the AEMC making changes to remove inefficiencies and improve incentives as proposed in the Directions Paper. These changes will assist the rollout, but will not be sufficient on their own to drive an accelerated rollout and some customers will continue to be left behind.

To drive a materially accelerated rollout, Intellihub supports the AEMC's proposals for an aged replacement policy, targets or a backstop. Any of these options will significantly accelerate the deployment of smart meters.

A backstop date requiring that 90% of meters are smart meters by 2030 would be the best option for acceleration. This approach would provide the market, policy makers and governments with greater certainty about the pace of the rollout. That will assist market participants to plan and deliver the rollout in the most efficient manner. It will also enable policy makers to have confidence in the progress of the rollout and develop complementary reforms that rely on the availability of smart metering data and services, eg two-sided markets and DER integration. The main benefit of this approach over other options is that it would give retailers flexibility to deliver the rollout in the most efficient way that minimises costs and maximises benefits while still ensuring a near-universal and equitable rollout for consumers by a set date.

We are confident that we can scale up our meter installation capacity to meet accelerated targets under any of the AEMC's options, including hiring and training additional installers across the NEM. We have also recently implemented a new online customer experience and tracking tool that provides customers with greater visibility and control over the status and timing of the meter installation process. These types of customer service tools will help ensure customers have a hassle-free installation experience under an accelerated rollout.

We agree with the AEMC that the rollout is currently affected by 'split incentives'. Smart meters can deliver benefits to a wide range of parties across the energy sector, but all of the costs are generally borne by retailers. We support reforms that make it easier for people other than retailers to obtain value from smart meters and share the costs of metering in proportion to the value they receive.

We support the AEMC's proposed options to develop additional revenue streams (eg DNSPs paying for access to power quality data) or spread the costs of installation (eg enabling parties who derive benefits to contribute to part of the costs of installation). We are already implementing both of these approaches on a commercial basis without the need for additional regulation of access to metering data or services. For example, we are providing power quality data to DNSPs on a commercial basis and our Albion Park Off Peak Plus project with Endeavour Energy and ten retailers involved Endeavour Energy funding a local smart meter rollout as a lower cost alternative to



replacing network load control equipment. We would welcome targeted reforms that will help us scale up these types of projects by reducing barriers and increasing demand for metering data and services.

The option of multiple parties being responsible for installation seems unworkable in practice, would be extremely complex to implement and could expose customers to material risks. Similarly, we do not see any reasons for considering changes to metering roles and responsibilities.

We also support the AEMC considering what steps could be taken to improve access to smart metering data and services. However, any data access framework should be proportionate to the issues that have been identified in the Australia context, rather than lifted from overseas markets or different services.

An improved framework for access to smart metering data and services could assist by improving clarity and reducing barriers and transaction costs. In particular, a process for agreeing on standardised data formats and delivery mechanisms for types of data that are expected to be commonly requested could help reduce transaction costs for both metering providers and DNSPs or other access seekers. Clarifying consent requirements could also help as this has been identified as a key barrier by several stakeholders.

To assist the AEMC's consideration of potential models for a framework for facilitating access to smart metering data and services, Intellihub engaged farrierswier to provide a report on this issue, which is attached to our submission.

We asked farrierswier to propose criteria for assessing whether an access framework for smart metering data and services would promote the national electricity objective (NEO), propose criteria for assessing the most suitable form of access framework, and provide a high-level description of a recommended model for an access framework that would best meet these criteria.

Intellihub also broadly supports the other options and potential reforms proposed in the Directions Paper. In particular, we support AEMC taking action to address installation challenges with multi-occupancy buildings, timeframes for family failure replacements, overly prescriptive retailer notice requirements, and issues Intellihub has raised regarding meter inspection requirements that create unnecessary costs.

We look forward to continuing to engage with AEMC staff on this important review as part of the AEMC's reference groups for the review. We would also be happy to provide any additional information that would assist your analysis.

If you have any questions regarding this submission please contact me on 0400 191 966 or wes.ballantine@intellihub.com.au.

Regards

Wes Ballantine
Chief Executive Officer
Intellihub

1. Introduction

Who we are

The Intellihub Group (Intellihub) is an Australian and New Zealand based utility services and metering intelligence company focused on electricity, gas and water metering services. We are a leading provider of electricity smart meter services in Australia and are currently deploying smart meters to residential and business customers in most states and territories in Australia.

We are a Metering Coordinator (MC), Metering Provider (MP), Metering Data Provider (MDP), Embedded Network Manager and Relevant Agent. We partner with electricity retailers, distributors and other energy sector participants to utilise smart metering technology to deliver data and services that improve the affordability, reliability and security of the electricity sector.

Structure of this submission

This submission responds to the AEMC's Directions Paper for the Review of the regulatory framework for metering services.

We have not responded to all of the AEMC's questions from the Directions Paper and have instead focused on the key questions where we consider we can provide useful information and perspectives that will assist the review.

The submission is structured as follows:

- Section 2 addresses the benefits of accelerating the smart meter rollout. This section responds to the AEMC's questions 2 and 3 on the penetration of smart meters required to realise benefits and options to accelerate the rollout.
- Section 3 addresses actions to unlock the benefits of smart meter data and services. This section responds to the AEMC's questions 4, 5 and 13 on aligning incentives, the minimum services specification and roles and responsibilities.
- Section 4 sets out our views on options for a data access framework. This section responds to the AEMC's questions 6 and 7 on data access.
- Section 5 briefly notes our support for other reforms proposed in the Directions Paper.

We also attach a report from farrierswier on a framework for access to smart metering data and services.

2. Accelerating the smart meter rollout (AEMC questions 2 and 3)

Intellihub strongly supports the AEMC's comments in the Directions Paper that 'smart meters are a key to enable a more connected, modern and efficient energy system that supports future technologies, services and innovation.'

Intellihub has deployed over 1 million smart meters in Australia and is seeing positive signs that the pace of deployment is increasing. However, the current smart meter installation rate means that many customers and the broader energy system will continue to miss out on the benefits of smart meters unless the rollout is accelerated.

The AEMC has proposed four potential options for accelerating the rollout:

1. **Improve incentives:** A series of reforms to improve incentives and remove inefficiencies in the meter installation process.
2. **Aged replacement:** Require all meters to be replaced once they have reached a certain age, eg 30 years.
3. **Targets:** Set targets for the rollout under which retailers must replace a certain percentage of their customers' meters with smart meters each year.
4. **Backstop:** Introduce a 'backstop' date by which all manually read meters must be replaced, eg 90% of meters required to be smart meters by 2030.

We support the AEMC making changes to remove inefficiencies and improve incentives as proposed in option 1. These changes will assist the rollout, but will not be sufficient on their own to drive an accelerated rollout that unlocks the benefits that the AEMC has identified.

Intellihub supports any of the AEMC's options 2, 3 or 4. Any of these options will significantly accelerate the deployment of smart meters. They will also provide the market, policy makers and governments with greater certainty about the pace of the rollout. This increased certainty will assist market participants to plan and deliver the rollout in the most efficient manner. It will also enable the AEMC and other policy makers to have confidence in the progress of the rollout and develop complementary reforms that rely on the availability of smart metering data and services, eg two-sided markets and DER integration.

We consider that option 4 – a backstop date requiring that 90% of meters are smart meters by 2030 – is likely to best promote the national electricity objective (NEO) out of these options. This option would be relatively simple to implement and would give MCs and retailers a clear date and target for planning. The main benefit of this option over other options is that it would give retailers flexibility to deliver the rollout in the most efficient way that minimises costs and maximises benefits while still ensuring a near-universal and equitable rollout for consumers by the end date.

This option should be implemented through a binding obligation in the rules. We do not consider that interim targets prior to 2030 are necessary.

The AEMC's other proposed reforms to address current inefficiencies in the installation process will help facilitate achievement of these acceleration options, including measures to address installations in multi-occupancy building and assist customers with site remediation issues.

We are confident that we can scale up our meter installation capacity to meet accelerated targets under any of the AEMC's options, including hiring and training additional installers across the NEM.

Intellihub has successfully implemented a new online customer experience and tracking tool for the smart meter installation process over the last 12 months. This digital tool provides customers with greater visibility and control over the status and timing of the meter installation process, with the next software release including the ability to rebook the installation online for a time that better suits the customer. These types of customer service tools will help ensure customers have a hassle-free installation experience under an accelerated rollout.

3. Unlocking the benefits of smart meter data and services

Minimum services specification (AEMC question 5)

We agree with the AEMC's conclusion that changes to the minimum services specification are not required. Our current smart meters are able to provide all of the data and services that are currently required by the market as well as the future services that are likely to be required. The key issue for the review to focus on is not the functionality of the meters themselves but how to unlock the value those meters can provide by accelerating the rollout and reducing barriers to providing smart metering data and services.

The Directions Paper notes that while the services covered by the minimum services specification should not change, 'to facilitate better and more consistent data access, the description of the minimum services specification may be required.' It is not clear to us what type of changes the AEMC is referring to with this comment, but we assume it relates to the descriptions of each of the existing services that are listed in the specification.

We do not consider that any changes to the descriptions of the services in the minimum services specification are needed. The current specification sets out high-level requirements for the functionality and services that every smart meter must be capable of providing. Those descriptions were intentionally kept high-level in the rules to enable innovation and enable parties to commercially agree on the details of the services they require and are willing to pay for. In practice, we agree much more detailed service specifications and service levels in our contracts when we provide these services. This approach enables us to tailor our services to the requirements of each user, eg agreeing on the specific types of data that are sought, the number and location of the meters for which data is sought, the sampling frequency and the timeframe and method for delivery.

Options for addressing split incentives issues (AEMC question 4)

We agree with the AEMC that an important issue that is currently affecting the pace of the smart meter rollout is 'split incentives'. Smart meters can deliver benefits to a wide range of parties across the energy system including consumers, retailers, DNSPs, AEMO and DER providers, but all of the costs of the smart meter installation and ongoing metering services are generally borne by retailers.

We support reforms that make it easier for people other than retailers to obtain value from smart meters and share the costs of metering in proportion to the value they receive.

The Directions Paper sets out three options for addressing incentives issues:

1. **Development of additional revenue streams:** Retailers remain responsible for metering but regulation supports the development of additional revenue streams to offset metering costs, eg payments for the provision of data to DNSPs.
2. **Spreading the costs of installation:** Retailers remain responsible for metering but parties who derive benefits can contribute to part of the costs of installation.
3. **Multiple parties responsible for installation:** Any party who could derive benefits (eg retailers, DNSPs or other parties) can be responsible for metering and bear the costs.

We support options 1 and 2 and are already implementing both of these options in small-scale projects and trials.

- Intellihub has agreements with two DNSPs to provide agreed types of engineering data including power quality data for specified sets of NMLs. This data is paid for by the DNSPs and is provided with the retailers' consent.
- Intellihub has also demonstrated the benefits of option 2 through its recent Albion Park Off Peak Plus project.¹ Intellihub partnered with Endeavour Energy and ten retailers to install 2,500 smart meters in Albion Park NSW to provide hot water load control services as a lower cost alternative to replacing Endeavour Energy's existing off-peak control system in its substation. Endeavour Energy contributed to the smart meter installation costs, which allowed the partner retailers to accelerate the rollout in the area.

Reforms could help remove barriers and reduce transaction costs so that we can scale up these types of projects and increase demand for metering data and services, for example by:

- improving incentives on DNSPs to purchase these services where they are more efficient than network solutions, as proposed in our Issues Paper submission
- the AER making it easier for DNSPs to recover their efficient costs of purchasing metering data and services
- removing barriers to the meter change process (eg by treating the meter replacement as a family failure for projects like Albion Park as proposed in our Issues Paper submission)
- making the AEMC's proposed reforms to the opt-out process and notice requirements, which should make it easier to replace meters under option 2
- developing standard data formats for commonly requested types of data as discussed in section 4 below.

The current low penetration of smart meters also reduces the demand for these services so actions to accelerate the rollout will also indirectly assist with addressing this issue as it will make smart meter data and services more valuable to DNSPs and other parties.

We do not support option 3 and do not consider that it is necessary or will be effective. This option will not address split incentives and will simply move all of the costs of metering from retailers to DNSPs (or other parties that become responsible for metering), creating a new split incentives issue where DNSPs are responsible for all of the costs but other parties share the benefits.

Our understanding of option 3 is that it would involve the DNSP taking on all of the retailer's current roles and responsibilities in relation to metering. The DNSP would become responsible for ensuring the customer has a working and compliant meter, appointing an MC and paying the MC. We understand that the AEMC does not intend there to be any changes to AER ring-fencing or DNSP revenue determinations and service classification decisions. This means DNSPs could not become the MC, MP or MDP and could not offer metering services as a regulated service.

DNSPs therefore would not be able to obtain any regulated revenue for metering costs unless they can justify expenditure on metering based on savings in other network costs or reliability improvements. The DNSP would need to appoint and pay a competitive MC and fund all of the costs of installation of the smart meter and all ongoing metering costs from its current regulated

¹ See https://utilitymagazine.com.au/smart-meter-installations-for-off-peak-electricity-systems/?mc_cid=2a0b0bc615&mc_eid=b142c6b74f

revenues. That would only be feasible if the smart meter led to sufficient savings in network costs or reliability improvements funded through the STPIs to cover the full amount of those costs, which is extremely unlikely. The DNSP would also need to conduct a RIT-D and competitive tender to assess the costs and benefits and appoint an MC (ie the DNSP could not just appoint itself or a related business as MC).

This option would be extremely complex to implement and expose customers to material risks:

- Major changes to the National Electricity Rules, National Energy Retail Rules and the standard distributor and retailer customer contracts would need to be made to make a person other than a retailer responsible for this role. The DNSP would need to take on all of the retailers' responsibilities including all metering consumer protections.
- It is unclear whether the AEMC envisages that the DNSP would need to negotiate agreements with every retailer to try to seek some contribution to metering costs from the retailer. It is likely to be extremely challenging to do so given the lack of any obligation on the retailer to contribute to those costs and the large number of DNSPs and retailers.
- Retailers would need to unbundle their retail energy and metering charges to avoid customers paying twice for metering (once through retail charges and once through network charges) or retailers charging customers for a service they are no longer responsible for providing. That change would be very complex to implement and could damage retail competition. It would also result in inequitable outcomes for customers – at sites where the retailer is responsible for metering the relevant customer would pay for metering, but where the DNSP is responsible for metering the costs would be smeared across all customers and the customer at that site would essentially get a free metering service that is paid for by other customers through network charges.

It is clear that the costs of this option would far outweigh its benefits and we encourage the AEMC to not consider it further.

Roles and responsibilities (AEMC question 13)

The Directions Paper does not propose any changes to metering roles and responsibilities. However, it notes proposals made by some stakeholders, including the proposal by some DNSPs that the DNSP should be able to appoint the MP in some situations such as in rural or remote regions.

Intellihub does not consider that any changes are needed to roles and responsibilities. In particular, it would not be appropriate to allow a DNSP to appoint the MP and there is no need for this change.

We understand that the basis for this change being proposed is that it might assist metering installations in rural and remote locations where the DNSP has existing staff. Intellihub deploys smart meters in many rural locations at present in accordance with the installation timeframes in the rules and without any issues. We are the largest MC in each of Tasmania and regional NSW, and we serve many premises in regional Queensland and regional South Australia.

The rules already allow the MP to appoint a contracted field service provider to undertake the meter installation. We currently engage a range of field service providers including DNSPs' field service providers such as Yurika in regional Queensland where there are benefits in doing so. The AER's distribution ring-fencing guidelines already contain waivers allowing the provision of these types of unregulated services by DNSP personnel in regional areas.

There is accordingly no need for this change and any issues are adequately addressed by the current regulatory regime. There are also considerable benefits for clarity of roles, responsibilities and consumer protections for the MC, MP and MDP roles to be performed by the same party rather

than splitting those roles. The MP can appoint a range of field service providers as contractors to the MP as we already do, but the current regime ensures that all legal responsibilities and liability remain with the MC and MP.

4. Options for a data access framework (AEMC questions 6 and 7)

Comments on the initial data access options identified by the AEMC and NERA

As noted above and in previous submissions, Intellihub is already providing smart meter data and services to other parties, including providing power quality data to DNSPs. The AEMC's Directions Paper and NERA's report on options for a smart meter data access framework have not demonstrated a need to develop a regulated framework for data access.

The NERA report sets out several examples of overseas data access models. However, it is notable that none of the examples NERA gives have resulted in the provision of power quality data to DNSPs (other than the Victorian model, where DNSPs as MCs have access to that data but there is no access framework requiring them to provide any data other than consumption data to other parties). The UK and New Zealand models NERA cites involve additional regulation and costs simply to provide the same consumption data as is already being provided in Australia. Indeed, Australia appears to be ahead of other jurisdictions as MCs like Intellihub are already providing power quality data to DNSPs on a commercially negotiated basis.

There is no value in further exploring the option of a centralised organisation providing meter data like the UK DCC model. Based on the cost information in the NERA report, the UK DCC's total costs are the equivalent of around AU\$1.2 billion a year to provide the same consumption data as Australian MDPs currently provide as part of their standard metering service. The DCC's per meter charges for providing just this basic consumption data are similar to the combined annual charge for MC/MP/MDP services in Australia which covers all services including the capital cost of the meter, installation, maintenance and data services. Adopting such a model in Australia would therefore be expected to significantly increase costs to consumers for no identified benefit.

Any data access options involving a high level of prescription, standardisation and centralisation are also the opposite of what an innovative market like metering requires. Rather than a government body or regulator trying to determine what services various parties may want, parties should be able negotiate what services they value, noting that this is likely to vary between different access seekers including different DNSPs. For example, some DNSPs may want to receive power quality data from every meter daily, while others may want data more frequently or a more targeted service to assess specific network issues, eg data just for those meters in specified areas or at different times of the day. Different use cases are also likely to require different types of data or services, different sampling frequencies (eg 10 second data instead of 5 minutes), faster delivery frequency or various other changes to the data variables.

The provision of additional data or services, including power quality data, will involve material costs for metering businesses. It is therefore important that data and services are paid for by the recipient of those services. The provision of data for free as proposed by some stakeholders would exacerbate the split incentives issues discussed above and risk further slowing the rollout by increasing the costs to MCs and retailers.

We also question the AEMC's legal power to make rules imposing any access model that involves regulation of the price or non-price terms of smart metering data or services. Under the National Electricity Law (NEL), the AEMC does not appear to have the power to make rules imposing access regulation or price regulation on any person other than network service providers.² Similarly, the AER does not appear to have the power under the NEL to regulate prices or resolve access disputes for any services other than network services.³ The creation of a new entity like the DCC would also clearly require legislative changes.

We therefore expect that the introduction of the AEMC's options 1 or 4, or any version of options 2 or 3 that involves the regulation of the price of metering data, would require amendments to the NEL. NEL amendments generally take several years to enact. Accordingly, we encourage the AEMC to focus on more targeted and proportionate solutions that can be implemented relatively quickly without law changes.

A proposed approach to facilitating access to data and services

Intellihub supports the AEMC considering what steps could be taken to improve access to smart metering data and services by reducing barriers and transactions costs, within the limitations on the scope of any such framework that are discussed above.

Any data access framework should be proportionate to the issues that have been identified in the Australia context, rather than lifted from overseas markets or different services.

Stakeholder submissions and discussions in the AEMC's services and data reference sub-group have identified areas where we consider that an improved framework for access to smart metering data and services could assist by improving clarity and reducing barriers and transaction costs. In particular, a process for agreeing on standardised data formats and delivery mechanisms for types of data that are expected to be commonly requested could help reduce transaction costs for both metering providers and DNSPs or other access seekers. Clarifying consent requirements could also help reduce barriers and transaction costs as this has been identified as a key barrier by several stakeholders.

The actions discussed in section 3 above in relation to options for addressing split incentives would also facilitate increased provision of smart metering data and services. Accelerating the rollout will also assist as some data and services are only valuable if there is a higher penetration of smart meters.

² The AEMC's rule making power under section 34 of the NEL is relatively broad. However, several provisions of the NEL indicate that this power is not intended to extend to making rules that impose access regulation or price regulation on any person other than network service providers. The subject matter for the NER in Schedule 1 of the NEL covers the regulation of prices for transmission or distribution services, and the regulation of the terms and conditions for the provision of electricity network services, but there is no equivalent power for any other services. When making such rules in relation to network services, the NEL requires the AEMC to take into account the form of regulation factors and the revenue and pricing principles. It seems unlikely that it would have been intended that the AEMC's rule making powers in relation to regulation of network services were limited in this way but that the AEMC has the power to impose access or price regulation on any other party without being subject to equivalent limitations. Schedule 1 allows the AEMC to make rules related to access disputes, but the NEL clearly limits the scope of the access dispute and access determination powers to network services. It seems unlikely that it would have been intended that the AEMC has a broad power to make rules related to access disputes and access determinations involving other parties that are not subject to any of the NEL provisions in Part 10 regarding access regimes.

³ The AER's economic regulation functions and powers under the NEL only apply to transmission and distribution services. The AER's powers in relation to access disputes and access determinations under Part 10 of the NEL only apply to disputes and determinations regarding network services.

To assist the AEMC's consideration of potential models for a framework for facilitating access to smart metering data and services, Intellihub engaged farrierswier to provide a report on this issue, which is attached to our submission.

We asked farrierswier to review the NERA report, the AEMC's Directions Paper, submissions and working group papers and:

- advise on matters that should be considered when assessing whether an access framework for smart metering data and services would promote the NEO;
- propose an assessment framework for determining the most suitable form of access framework; and
- based on the above matters, provide a high-level description of a recommended model for an access framework for smart metering data and services if it was determined that the introduction of such a framework would promote the NEO and was within the AEMC's rule making powers.

Farrierswier's report is attached to our submission. The key findings of the report are:

- An analysis of the issues identified by the AEMC with access to smart meter data and the threshold conditions that must be met to justify an access regime shows that the case for establishing a third party access regime with economic regulation of the terms and conditions of access does not hold for smart meter non-consumption data services in the NEM.
- While there is unlikely to be a case to pursue a traditional third party access regime with economic regulation of the terms of access, a data access framework could assist in lowering transaction costs and removing barriers for sharing power quality data by addressing the AEMC's identified issues related to complexities and costs of negotiating access to data, consent requirements and information not being provided in a consistent form.
- Farrierswier has developed a practical alternative option to address the key issues faced by parties seeking access to data. This alternative option comprises four key default elements and would retain provision for parties to negotiate bespoke arrangements that depart from these default arrangements. The key elements of this alternative option are:
 - *Governance framework for determining what services should be subject to standardisation:* This would be delegated to a suitable body (eg the Information Exchange Committee) to manage the standardised service list and update it over time
 - *Access agency:* Clarifying retailer and customer consent requirements for services on the standardised service list
 - *Standardised items specifications:* Establishing standard formats for data and services that are included on the standardised service list
 - *Coordination mechanism:* Agreeing and establishing a default exchange mechanism such as using existing processes (such as the B2B system) or agreed new processes.
- This option draws on elements of NERA's options 2 and 3, while seeking to address stakeholders' stated concerns, minimise implementation costs by leveraging existing B2B arrangements, and preserve flexibility to adapt to changes over time.

5. Other issues raised in the Directions Paper

Intellihub broadly supports the other options and potential reforms proposed in the Directions Paper. We look forward to seeing more detail in reference group meetings or the Draft Report to enable us to comment more fully on those proposals.

In particular, we support AEMC taking action to address:

- installation challenges with multi-occupancy buildings;
- the current lack of clarity and certainty around timeframes for family failure replacements;
- overly prescriptive notice requirements that can increase the costs of retailer-led deployments; and
- issues Intellihub has raised regarding AEMO meter inspection requirements that create unnecessary costs.

Multi-occupancy buildings

The AEMC set out several options to address multi-occupancy installation challenges in the meter installation sub-reference group meeting on 19 October. Intellihub supports option 3 – MC changes meters for all customers on the shared fuse. Option 3 will be the most efficient way to address the long-standing challenges involved in multi-occupancy situations that have led to poor outcomes for those customers and high costs for the industry. We do not support option 4 – DNSP appointment of MC. The challenges involved in option 4 and the regulatory changes needed are much greater than those set out in the AEMC's slides, with this option involving all of the same issues as the 'multiple parties responsible for installation' option discussed in section 3 above.

We agree with the AEMC's comments in the Directions Paper and 19 October reference group meeting that there would be value in additional mechanisms to help address sites that need remediation work. We already address many remediation issues while we are onsite but more substantial remediation requirements are an issue for some customers and can delay the installation process and lead to unexpected costs for customers. We agree with the AEMC's comments that this issue is unlikely to be able to be resolved under the rules and may require state government involvement and funding.

Site remediation issues

We see merit in the AEMC's option of a 'sinking fund' to address site remediation issues as proposed in the 19 October reference group slides. However, careful consideration needs to be given to the source of funding. Funding from governments would be the best solution, but the AEMC obviously does not have the power to implement that and can only recommend it. Funding from network charges could possibly be an effective option but the AEMC is also unlikely to be able to implement that approach under the rules without a jurisdictional government obligation to require DNSPs to fund it. Funding from industry participants would just increase the costs of metering and risk further delaying the rollout and is also probably not within the AEMC's powers under the rules. Accordingly, we encourage the AEMC to work closely with jurisdictional governments to explore potential solutions to this issue.

Smart meter inspection requirements

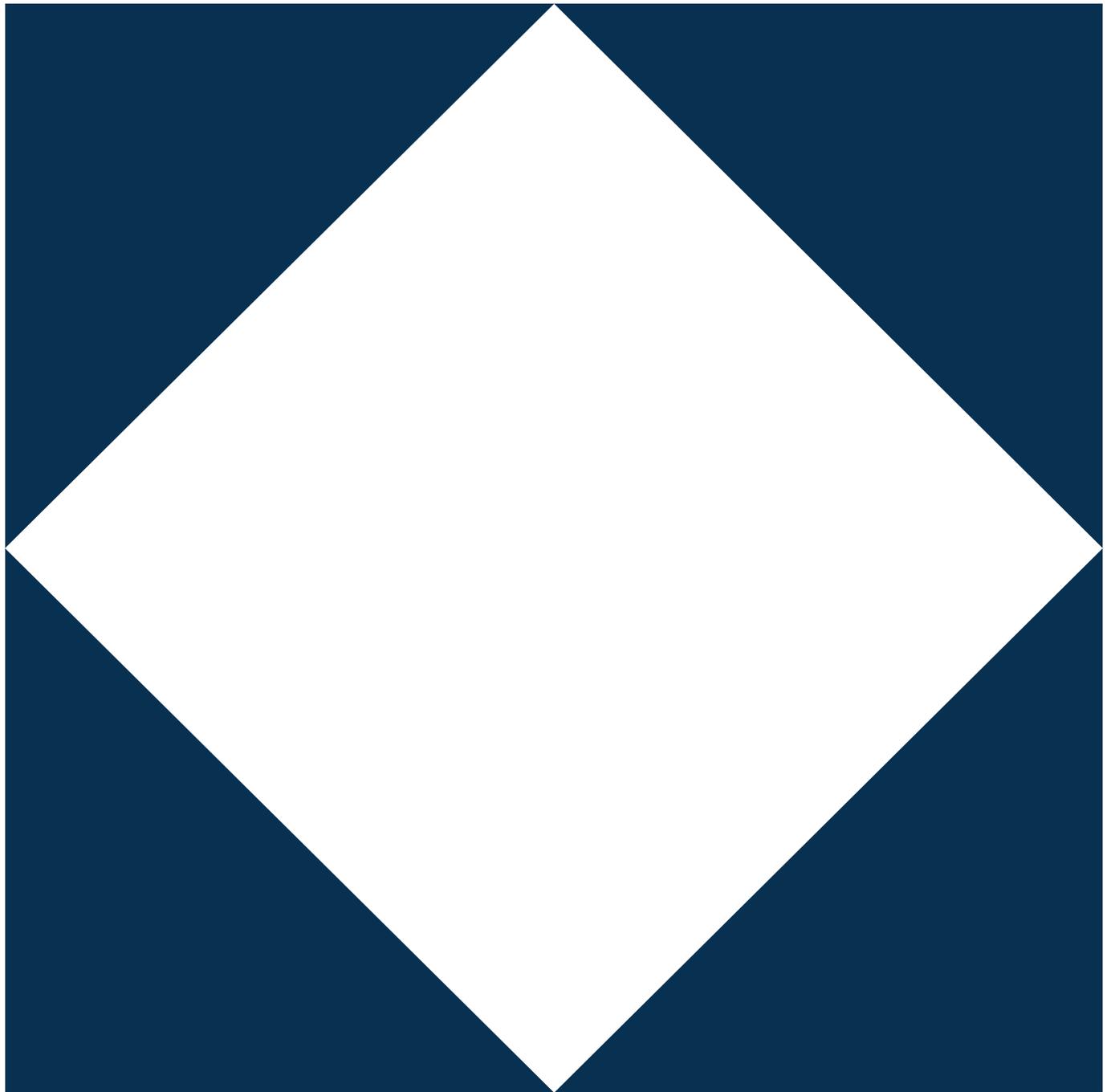
The Directions Paper recognises the issues we raised in our Issues Paper submission regarding meter inspections. As noted in our previous submission, addressing this issue could avoid millions of unnecessary physical inspections for smart meters. AEMO's current practice appears contrary to the



relevant provisions of the NER, does not sufficiently recognise that the advanced remote monitoring capabilities of smart meters can perform most of the functions that were traditionally performed by a physical inspection of manually-read meters, and will lead to significant additional costs for consumers.

We note that AEMO's Issues Paper submission proposed alternative amendments to the meter testing and inspection requirements in the rules. AEMO's proposed amendments will not address the inspections issues raised in our submission. Under AEMO's proposed amendments, inspection requirements for whole current meters would be determined in accordance with an asset management strategy approved by AEMO, with no guidance in the rules. This amendment would actually be likely to *increase* inspection requirements for whole current smart meters compared with the current rules, which clearly state that inspections are only required when the meter is tested. There is no NEO justification for such a change.

It is important that the AEMC clarifies the rules requirements on inspection as part of accelerating the smart meter rollout, otherwise the costs to consumers could be up to \$10-15 a year higher than is necessary due to excessive physical inspection requirements.



Review of AEMC data access proposals

A review and alternative option development for
Intellihub

28 October 2021

Disclaimer

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Glossary

Term	Definition
AEMC	Australian Energy Markets Commission
AEMO	Australian Energy Market Operator
DER	Distributed Energy Resources
DNSP	Distribution Network Service Provider
NEM	National Electricity Market
NER	National Electricity Rules
NEO	National Electricity Objective
MC	Metering Coordinator
MDP	Metering Data Provider

Executive Summary

CONTEXT FOR THIS REPORT

The Australian Energy Market Commission (AEMC) is currently conducting a review of metering services in the national electricity market (NEM).

A priority focus area for the review is the arrangements for access to non-consumption data from meters.

To provide advice on this matter to feed into its direction paper (published on 16 September 2021), the Commission engaged NERA Economic Consulting to explore the challenges surrounding data access and to develop potential options for arrangements that allow for greater access to metering data in the NEM. In its report to the AEMC,¹ NERA set out four potential options for a data access regulatory framework for consideration by the AEMC.

OUR TASK FOR INTELLIHUB

In response to the AEMC's directions paper and the NERA report, *'Smart Meter Data Access Framework'*, Intellihub has asked farrierswier to consider the matter of data access in the NEM and the options put forward by NERA in respect of a data access framework in the NEM. Specifically, farrierswier has been asked to identify:

1. what matters should be considered when establishing a third-party access framework for non-consumption smart meter data, and
2. an assessment framework for considering options to address the problems related to data access in the NEM.

In light of items 1 and 2 and the issues raised by stakeholders in submissions to the AEMC's review, we have also been asked to examine whether there are other preferable options for a data access framework in the NEM that would better promote the NEO relative to the status quo and the options set out by NERA for consideration by the AEMC.

AN OVERVIEW OF OUR FINDINGS

What matters should be considered when establishing a third party access framework for non-consumption smart meter data?

Before deciding whether a traditional third-party access regime is required in the NEM, it is important first to understand the key drivers of the data access issues being experienced in practice by market participants operating in the space. To provide a framework to help unpack these problems, we have considered:

- which smart meter enabled services should be accessible?
- whether access to those services should be mandated or facilitated by regulation?
- if regulation is required to facilitate access, what problems should it seek to address?

¹ NERA's report was published with the AEMC directions paper on 16 September 2021.

Any framework for access to smart metering data and services should be designed to address the issues that have been identified with the current regulatory arrangements, and should be proportionate to those arrangements.

In the directions paper, the AEMC considers that there are substantial benefits that can be enabled by access to smart meter data, in particular power quality data. The AEMC considers that there are constraints to efficient access to this data due to:

- the current low penetration of smart meters, ie a higher penetration of smart meters is needed to increase the value of smart meter data and services
- complexities and costs of negotiating access to data
- uncertainty over accountability and ownership of data, including retailer consent requirements and issues with ongoing access to data if consumers switch retailers
- information not being provided in a consistent form
- the price of data potentially exceeding the value that some stakeholders place on it.

Preconditions for establishing third party access regulation

We have also set out the threshold conditions that must be met when deciding whether a traditional third party access framework for smart meter enabled services is appropriate. These conditions include whether:

- metering coordinators (MCs) have market power in the provision of smart meter enabled services
- other market participants and access seekers have countervailing market power
- the services can be economically duplicated, and
- the value of the services to access seekers is greater than the cost of provision and the cost of enabling access.

Our analysis of these conditions in the context of the NEM shows that the case for establishing a third party access regime with economic regulation of the terms and conditions of that access does not hold for smart meter non-consumption data services in the NEM.²

The AEMC's directions paper does not identify market power issues as a barrier to data access. The AEMC notes that some stakeholder submissions raised market power concerns, but no evidence is provided that either: 1) MCs have refused to provide access to metering data (and as non-vertically integrated entities they would have no incentive to refuse access), or 2) MCs sought to charge monopoly prices. Indeed, there is considerable competition between MCs, and access seekers have countervailing market power though economic bypass options due to DNSPs being the sole buyer of power quality data.

The AEMC has identified that some access seekers may currently place a value on data that is lower than the price being sought by MCs. However, the AEMC notes that this is partly due to the low penetration of smart meters, which will not be addressed by a data access regime. If the efficient cost of providing data exceeds the value placed on that data, the appropriate regulatory solution is not to regulate access at below-cost prices. The focus should instead be on trying to reduce costs or increase benefits, for example by increasing the penetration of smart meters or reducing transaction costs.

Our consideration of these conditions has also helped to establish guiderails within which any other regulatory remedies that seek to lower transaction costs through a data exchange framework need to be

² Appendix A provides a high level overview of Australia's default third party access regime.

assessed. For the reasons explained in **section 3** of this report, we consider that any regulatory remedy for the identified data problems should:

- not have a cost to implement that exceeds the cost of a third party bypassing the meter provider's infrastructure to duplicate the service itself (for example, installing a network device or obtaining the service from behind the meter technologies)
- not involve costs that exceed the value of the benefits DNSPs or other third parties would derive from the data or service (that is, there must be a net benefit to the regulatory intervention)
- be technology and participant agnostic, providing access to desired services not specific infrastructure.

An assessment framework for considering options to address the problems related to data access in the NEM

While we have found that there is unlikely to be a case to pursue a traditional third party access regime with economic regulation of the terms and conditions of that access, we consider there are desirable regulatory measures that could be implemented to address the problems identified by the AEMC. In particular, a data access framework could assist in lowering transaction costs and removing barriers for sharing power quality data by addressing the identified issues related to:

- complexities and costs of negotiating access to data
- consent requirements
- information not being provided in a consistent form.

To help guide the AEMC in considering options for regulatory measures that target the transaction costs issues, we have established a fit for purpose assessment framework. This framework, which includes an assessment approach and assessment criteria, is framed in the context within which the AEMC is required to make decisions – that is, having regard to the national electricity objective (NEO) and the long-term interests of consumers.

Our proposed assessment framework is set out in **section 4** of this report.

Preferable options for a data access framework in the NEM that would better promote the NEO relative to the status quo and options set out by NERA for consideration by the AEMC

We have developed a practical alternative which takes into account the matters that should be considered when establishing a third party data access framework (section 2), the preconditions for doing so (section 3) and the assessment framework (assessment 4). This alternative option provides a regulatory remedy to the key issue experienced by market participants seeking access to data in the NEM – that is, data exchange transaction costs.

The alternative option comprises four key default elements and would retain provision for parties to negotiate bespoke arrangements that depart from these default arrangements. The key default elements of the alternative option are as follows:

- *Governance framework for determining what services should be subject to standardisation* | This would be delegated to a suitable body (for example, the information exchange committee) to manage the standardised service list and update it over time
- *Access agency* | Clarifying what retailer and customer consents are (or are not) required for services on the standardised service list
- *Standardised items specifications* | Establishing standard formats for data and services that are included on the standardised service list

- *Coordination mechanism* | Agreeing and establishing a default exchange mechanism such as using existing processes (such as the B2B system) or agreed new processes.

This alternative option draws pragmatic elements from the NERA options 2 and 3, whilst seeking to address stakeholders' stated concerns. It would also minimise implementation costs and preserve flexibility to adapt to changes in the scope of services sought, the nature of the infrastructure providing those services, and the value of the benefits derived by access seekers.

It also recognises that the regulatory remedy for data exchange transaction costs should not impose higher costs than the value of the data or DNSPs' or third parties' standalone cost of data acquisition.

We note the following in relation to the alternative option:

- *Address the problem?* | By combining elements of NERA options 2 and 3, the alternative option will address many of the coordination and consent problems, and hence transaction cost issues and barriers, currently experienced by DNSPs and other parties in the NEM.
- *Likely to deliver efficiency benefits?* | This option supports dynamic efficiency and innovation by being flexible to different use cases and avoiding the need to impose an access regime that is not technology and participant agnostic in how those services are acquired. It supports productive efficiency by lowering transaction costs for participants and thereby making it easier for them to access services as inputs to their own services rather than incurring the costs of inefficient bypass solutions. It is more likely to be allocatively efficient than options that impose a cost to administer that would exceed the value that access seekers place on data services.
- *Likely to minimise costs?* | The extent of costs and time involved in implementing this option would not be substantial, particularly if existing governance forums are used for specific standardised services and existing systems were leveraged to provide the exchange architecture and associated process. Ongoing costs would also be minimised by providing industry a role in establishing, managing and standardising the default access items specifications.
- *Consistent with principles of good regulatory practice?* | This option would be flexible to new use cases, targeted to the key practical problems currently being experienced in the NEM and provide a proportionate response to the problems associated with the transaction costs of access to non-consumption data in the NEM.

Based on our high level assessment, this alternative option is also likely to better promote the NEO relative to the four regulatory framework options put forward by NERA for consideration by the AEMC.

Appendix B of this report provides a high level summary of the four NERA options against our assessment framework.

1. Introduction

1.1 AEMC REVIEW CONTEXT

The AEMC is currently conducting a review of metering services. It has identified the review scope as:

The review will examine the current state of metering services and consider the future requirements of metering services; having regard to stakeholder feedback and reforms which are underway by the Commission, other market bodies and industry.³

Relevant to this report, the review scope includes:

- *whether the expected benefits of smart meters are being realised, and if not, why*
- *if there are any barriers to either the roll out of smart meters, or the expected uses of smart meters*
- *the services meters may be expected to deliver in the future*
- *the impact of other market reforms on metering frameworks*
- *the desired role of smart meters in the future.⁴*

Directions paper

The AEMC published its directions paper in September 2021. Among other things, it identified enabling appropriate access to data from meters as a priority area of focus for the review, stating:

A crucial enabler of smart meters providing more services is the access and exchange of power quality data that they provide. Many of these benefits (and the services required to provide the benefits) require consistent access to smart meter data. The Commission has found the current arrangements for negotiating and utilising data that the meter can provide are inefficient and likely not contributing to the long-term interest of consumers.

... The Commission considers that a data access and exchange framework would likely satisfy this Review's assessment criteria by providing certainty to responsible parties, assisting in the provision of more innovative products and services, improving investment decisions via improved data, and providing information to improve system integrity.⁵

NERA report

In developing its directions paper, the AEMC commissioned NERA to:

examine the challenges surrounding data access in greater detail, and to develop a series of options for new frameworks to allow for greater access.⁶

³ AEMC, Term of Reference – Review of the regulatory framework for metering services, 3 December 2020, p. 3.

⁴ AEMC, Term of Reference – Review of the regulatory framework for metering services, 3 December 2020, pp. 3-4.

⁵ AEMC, Directions Paper | Review of metering services, 16 September 2021, pp. iii-iv.

⁶ NERA, Smart Meter Data Access Framework Options, 13 August 2021, p. 1.

To address this scope NERA's report:

- briefly sets out the background to its review, as well as the roles and responsibilities of each party within the current regulatory framework
- identifies the theoretical challenges that limit the provision of data to distribution network service providers (DNSPs)
- reviews four case studies NERA considers are relevant to access rights, which were smart meter data arrangements in Victoria, Great Britain and New Zealand, as well as gas pipeline access rights in Australia, and
- develops a series of data access options and compares these against assessment criteria that NERA developed for its review.

1.2 OUR SCOPE

Intellihub has asked farrierswier to prepare a report capable of submission to the AEMC that addresses the following scope:

Having regard to the AEMC's task and National Electricity Objective, identify:

1. *What matters should be addressed when considering establishing a third party access framework for non-billing smart meter data*
2. *What assessment framework would be appropriate for considering options for a data exchange framework*

In light of items 1 and 2, and the current issues raised by stakeholders in submissions to the AEMC's review, examine:

3. *Whether there are other preferable options for a data exchange framework that would better promote the NEO than the options set out in the AEMC's Directions Paper.*

1.3 OUR APPROACH AND STRUCTURE OF THIS REPORT

To address the above scope, we have taken the following approach:

- *Problem statements* | Considered the issues raised by stakeholders and the AEMC to date and the context for third party access in Australia, to develop problem statements for issues that may warrant regulatory intervention—in section 2.
- *Preconditions for a third party access regime* | Identified what matters must be addressed and accounted for when considering establishing a third party access framework, and whether these hold for smart meter data services—in section 3
- *Assessment framework* | Developed a fit for purpose assessment framework having regard to the context in which the AEMC would be required to make recommendations for a data exchange framework, including having regard to the national electricity objective (NEO) —in section 3.2
- *Alternative option* | Scoped an alternative option to address identified problems in a targeted and commensurate way—in section 5

In addition, Appendix A provides an overview of Australia's National Access Regime and Appendix B provides a high level assessment of the options put forward by NERA, for consideration by the AEMC, having regard to the assessment framework described in section 4.

2. Defining the problems

This section sets up a framework to allow us to understand the drivers of the data access issues being experienced by market participants in the Australian context, to ensure that the problems that need to be addressed have been clearly defined. Understanding the drivers of the problems will then help us to test whether a traditional third party access regime provides an appropriate response to the problems, or whether other, more targeted remedies may be needed.

To help define the problems, the following questions are considered:

- Which smart meter enabled services should be accessible?
- Should access be mandated or facilitated by regulation?
- If regulation is required to facilitate access, what problems should it seek to address?

2.1 WHAT ISSUES HAVE BEEN IDENTIFIED BY THE AEMC?

Any framework for access to smart metering data and services should be designed to address the issues have been identified with the current regulatory arrangements and should be proportionate to those arrangements.

In the Directions Paper, the AEMC considers that there are substantial benefits that can be enabled by access to smart meter data, in particular power quality data.

The AEMC considers there to be constraints to efficient access to this data due to:

- the current low penetration of smart meters, ie a higher penetration of smart meters is needed to increase the value of smart meter data and services
- complexities and costs of negotiating access to data
- uncertainty over accountability and ownership of data, including retailer consent requirements and issues with ongoing access to data if consumers switch retailers
- information is not provided in a consistent form
- the price of data may exceed the value that some stakeholders place on it.

The Directions Paper notes that submissions to the consultation paper also expressed concerns relating to the following issues, but the AEMC does not indicate whether it agrees with these concerns:

- limited bargaining power or incentives to negotiate between parties
- potential for perverse incentives through duplicative devices, such as network devices to access data
- restrictive commercial arrangements impacting the ability to provide data to third parties, including DNSPs
- market power issues.

2.2 WHICH SMART METER SERVICES SHOULD BE ACCESSIBLE?

Access to consumption data from meters is already subject to effective arrangements for third party access

It is important to recognise upfront that metering services in the National Electricity Market (NEM) are already subject to a third party access framework for meter consumption data. This is true of both legacy

meters still owned and operated by DNSPs and smart meters that have been competitively deployed since the AEMC's competition in metering reforms.

Other than some instances of consumers gaining timely and easy access to their own data, the effective functioning of this consumption data access framework for market participants has not been questioned in this review. The Consumer Data Right will also make significant reforms to make it easier for consumers or their authorised parties to access this data.

This is relevant when considering the case studies presented by NERA, given that:

- in two of its case studies (Great Britain and New Zealand) the access regime is primarily to address access to meter consumption data, and
- none of the case study access frameworks NERA examined have been successfully used to provide third party access to power quality data at scale.⁷

Access to power quality data

The minimum service specification for smart meters is detailed in Chapter 7 of the National Electricity Rules (NER or Rules). The minimum specifications cover both billing and consumption data requirements, and other energy data requirements, including power quality data.

In contrast to billing and consumption data, the Rules:

- do not provide explicit guidance on how non-consumption information such as power quality data should be collected and shared, and
- treat access to this data as an additional value-add service to the metering installation which can be provided on commercial and negotiated terms, subject to the terms of the Metering Coordinator's (MC's) appointment by the retailer.

This means that access to power quality and other energy data is currently permitted. However, given it is not prescribed, it also means that there is no standardisation of the collection methods (which we discuss below).

Access to other smart meter enabled services

While the AEMC's direction paper focusses on power quality data access, it will be important to ensure that any framework developed to support access to smart metering data is flexible and able to adapt to changing circumstances.

In this context, it may be prudent to consider whether other smart meter enabled services valued by market participants (either now or in the future) could be efficiently facilitated through any measures implemented in this review, rather than through standalone bypass solutions. An example of this is load control services enabled by smart meters which may be valuable to retailers, DNSPs or DER aggregators, and are already being provided by some MCs.

⁷ We note that where power quality data is being use in Victoria, the DNSPs are both the collector and user of the data.

2.3 SHOULD ACCESS BE MANDATED OR FACILITATED BY REGULATION?

Consent requirements for providing access?

There are recognised problems with agency and consent requirements for MCs⁸ to provide what may be desirable access to non-consumption data. Having regard to stakeholder submissions and its reference group, the AEMC has acknowledged that contractual agreements between parties can explicitly deny access or exchange between market participants.

This may be a function of retailer incentives but has also been attributed to certain provisions in the Rules. For example:

- NER clause 7.15.4 provides that data can be provided to any person with the customer's consent or can be provided to DNSPs without customer consent to enable them to meet their obligations to provide a safe, reliable or secure network.
- NER clause 7.6.1(b) also provides that data and services can only be provided to DNSPs or other parties on a commercial basis, subject to the terms of the MC's appointment by the retailer.

This means that retailers can, and do in practice, contractually require their consent before data or services are provided to any person, including DNSPs.⁹

The problem to be addressed is whether there are there any impediments to those who have the ability to provide smart-meter enabled services being able to do so, and if so, what form of regulatory intervention is desirable to overcome this.

Is there market power warranting regulation of how access terms and conditions be determined?

To understand the source of the problems being experienced by market participants, it will be important to explore whether there could be a market power problem on the part of MCs. This requires consideration of:

- the market power of MCs
- the countervailing power of other market participants and access seekers
- whether the services can be economically duplicated
- whether a net benefit from regulated access can be expected.

Market power is explored further in section 3.

⁸ We note that data services could be provided by MCs or Metering Data Providers (MDPs) under the rules, but we just refer to MCs in this report for simplicity. In practice, the MC and MDP roles are usually performed by the same person.

⁹ Intellihub Group, Submission to AEMC review of the regulatory framework for metering services, 1 February 2021, p.17.

2.4 IF REGULATION IS REQUIRED TO FACILITATE ACCESS, WHAT PROBLEMS SHOULD IT SEEK TO ADDRESS?

Can transaction costs be lowered through standardisation?

If it is found that there is not a market power problem that would warrant third party access regulation, then this raises the question of whether there are other barriers or transaction costs that result in a lower than efficient level of the provision of smart metering data and services.

Based on the issues raised in submissions, it appears that transactions costs may be exceeding the value of some services for certain potential users of those services. The following questions seek to unpack this issue into the key candidate areas of transaction cost identified in the review process so far.

Is standardisation of some meter-enabled services warranted?

The AEMC considers that the minimum specification for meters results in current meters having all the functionality that is necessary to provide the services that are likely to be sought by users now and in the foreseeable future. However, there is no standardisation of how the non-consumption data is collected and shared with potential access seekers. In contrast, the consumption data has AEMO-defined standard formats.

How could the exchange of standardised services be coordinated?

Similar to above, there is no standardisation of how the non-consumption data is exchanged.

3. Preconditions for establishing third party access regulation

This section sets out the threshold conditions that must be met when deciding whether a traditional third party access framework for smart meter enabled services is appropriate. Building on the market power problem statement, these conditions include whether:

- MCs have market power in the provision of smart meter enabled services
- other market participants and access seekers have countervailing market power
- the services can be economically duplicated, and
- the value of the services to access seekers is greater than the cost of provision and the cost of enabling access.

We consider each of these conditions in the Australian context below and identify implications for the AEMC's review. These implications help identify:

- whether access should be required through mandated third party access arrangements versus facilitated by regulation to lower transaction costs
- any economic guiderails to the design of regulatory measures to facilitate access.

3.1 WHAT LEVEL OF MARKET POWER EXISTS?

We have considered whether the parties currently, or likely to be, involved in transacting power quality data have market power, and to what extent. The table below sets out our observations, and what this means for the AEMC.

Table 3.1: Market power considerations

Party	Market power consideration	Implications
MC/MDP	Smart meters are not monopoly infrastructure in the sense that this would be assessed under Australia’s National Access Regime (see Appendix A for an overview of this).	The case for regulated access would not meet the requirements of Australia’s default third party access regime.
	Access to the market for provision of smart meter services as a Metering Provider is open to any qualified service provider for all electricity customers other than in Victoria. There are currently about 10 competitive MCs registered by AEMO (excluding DNSPs who are only MCs for type 5 or 6 meters or in Victoria).	<p>Competition between MCs limits their market power, especially where access seekers only need data or services from a sample of meters rather than every meter, which is likely to be the case for most data services.</p> <p>Regulatory remedies for accessing smart meter enabled services should consider the costs they impose on participants and market entrants, and therefore the impact this has on:</p> <ul style="list-style-type: none"> • the cost of entering this market, and the level of competition therein • the pace of smart meter deployment.
	<p>Other parties in adjacent markets can either:</p> <ul style="list-style-type: none"> • negotiate to acquire access to the smart meter enabled services from the metering provider at a connection point, or • duplicate the infrastructure for acquiring the service themselves (eg installing a network device or obtaining the service from behind the meter technologies). 	Any regulatory remedy for the identified problems should not have a cost to implement that exceeds the cost of a third party bypassing the meter provider’s infrastructure to duplicate the service itself.
	MCs/MDPs are not vertically integrated with participants in other parts of the energy sector. Some MCs are related parties of DNSPs, but they must be ring-fenced.	Access regimes are more commonly used where a vertically integrated supplier has an incentive to refuse to provide access or discriminate to benefit its upstream or downstream businesses. MCs/MDPs have no incentive to refuse access to any metering services or offer discriminatory terms.

Party	Market power consideration	Implications
Retailer	As the AEMC has observed, contractual agreements between retailers and MC can and do explicitly require consent for the MC to provide data or services to other parties	This practice may be constraining the agency of the MCs who would otherwise have the ability and incentive to maximise the use of smart meter enabled services by other market participants. However, retailers should have an incentive to permit DNSP access to power quality data, as there is no detriment to the retailer and it is likely to benefit from reduced MC charges.
	Most retailers are much larger firms than Australia's current MC firms. They appoint MC's from the competitive MC market, and therefore likely to have sufficient buyer power to ensure that any material benefits that MC's derive from selling smart meter-enabled services to other parties are reflected in the market price that retailers pay to their MC.	If retailers' contractual ability to consent to third party access to services from their MC were removed, this does not mean retailers would not still be able to benefit from the shared use of MC's assets and services over time.
DNSPs and third parties	Duplication of the infrastructure needed to provide power quality and load control services is economic in a range of circumstances, as currently evidenced by: <ul style="list-style-type: none"> • DNSPs installing load control devices • DNSPs installing power quality measurement devices • DER providers making use of behind the meter technologies to implement load control (e.g. in various VPP and demand response business models). 	As noted above, the upper bound cost of regulatory remedies must not exceed the standalone cost of bypass. The pace of innovation in behind the meter technologies, and resulting cost savings, should be considered when estimating the net benefits of regulated third party access.
DNSPs	DNSPs are monopoly providers of distribution use of system services for the location in which a given meter is installed.	As a single buyer of power quality data for network purposes, DNSPs will have significant countervailing buyer power.

3.2 HOW DO ACCESS SEEKERS VALUE POWER QUALITY DATA?

Factors affecting how DNSPs value data

The value that a DNSP derives from power quality data access:

- will be a function of the number of sites that that MC can provide data for
- will vary depending on the presence of network constraints in proximity to a given meter, which may vary over time or have a finite benefit window until the DNSP implements a network augmentation
- may vary in future if effective power quality incentives are introduced into DNSPs' service obligations or incentive schemes.

Item 1 has been observed by NERA and may be considered within the remedy options for this review.

However, we observe that items 2 and 3 mean the value DNSPs place on power quality data may be low or time constrained for reasons beyond the scope of the AEMC's current review.

The value of power quality data at a given metering point is subject to the same recognised challenges facing all non-network alternatives where the network augmentation is deferred but not avoided.

There are measures initiated through the AEMC's recent August 2021 rule determination for access, pricing and incentive arrangements for DER that may increase the value that DNSPs place on power quality data. The determination relevantly requires:

- that the AER review and report on incentive arrangements for export services by 31 December 2022, which also includes considering arrangements that incentivise DNSPs to efficiently deliver export services rather than solely focusing on maintaining and improving services
- DNSPs will not be able to offer a static zero export limit to a small customer who is seeking to connect DER to the network, unless it is requested by the customer, or an exception listed in the AER's connection charge guidelines applies.

There will likely be a 'chicken and egg' problem with establishing financial incentives on power quality before that data has been robustly collected with a sufficient timeseries for target setting. Nonetheless, the above proposed measures could generally be expected to increase the value that DNSPs place on such data. Whether they will need to procure it from MC is unclear as discussed below.

How other third parties value data

Power quality data is not used in financial settlements, and therefore does not necessarily need to be of market grade in the way that consumption data does. Third party users of this data may be seeking it to provide services that better manage customer supply quality, to support improved DER orchestration and hosting, or to identify opportunities to offer network support or market ancillary services. This means any cost effective means of acquiring this data will be pursued.

DER vendors are already installing equipment capable of measuring power quality data behind the meter.

In 2020 multiple Australian DER vendors banded together to develop the [DER Visibility and Monitoring Best Practice Guide](#). The target outcomes of this collaboration were to:

Provide consistent data required to equitably and cost effectively increase network hosting capacity for DER. Enable regulatory bodies, DNSPs, academics and other parties to procure and combine data from multiple sources to meet their network modelling and visibility needs – subject to appropriate commercial arrangements.

Enable consumers and industry participants to have consistent information sources to ensure and evaluate optimal operation and system quality.

Vendors who did not previously gather all the specified data will write the data collection into their firmware, and data availability can be expected to become standard functionality for participating vendors.

As this DER industry practice proliferates, the willingness of this cohort of third party vendors to pay for smart meter sourced data will decline. The price at which such vendors are willing to share it with DNSPs may also affect DNSPs' valuation of smart meter enabled power quality data.

There will be significant efficiency benefits in providing this data from smart meters rather than installing a second device to collect the same data, but the existence of this alternative will constrain the market power of MCs.

Implications for the AEMC's task | Any regulatory remedy for the identified problems should not have a cost to implement that exceeds the value of the benefits DNSPs or other third parties would derive from the data or service.

Foreseeable changes in the incentives, obligations and technologies available to candidate data access seekers suggest regulatory remedies should favour incremental change and preserve flexibility to adapt to changes in the scope of services sought, the nature of the infrastructure providing those services, and the value of the benefits derived. The existence of alternatives further demonstrates that MCs do not have sufficient market power to justify access or price regulation.

3.3 ACCESS TO INFRASTRUCTURE VERSUS ACCESS TO SERVICES

As discussed above, there are multiple technology solutions capable of providing power quality data. This means any regulatory remedies for data access should be technology agnostic. Intervention to regulate open access only to one form of technology (that is, smart meters) could stymie efficient innovation in other technologies or increase the costs of other technologies by impeding their ability to monetise power quality services. It could also inhibit efficient investment and innovation in smart metering if regulation increases the costs of metering solutions compared with other alternatives or reduces the scope for innovation by imposing overly prescriptive functional or service specifications.

Implications for the AEMC's task | This means regulatory remedies:

- should be technology and market participant agnostic
- adopt a service access rather than asset access approach
- not inhibit innovation in the development of new services.

3.4 CONCLUSION

The key implication of these conditions is that the case for establishing a third party access regime with economic regulation of the terms and conditions of that access does not hold for smart meter non-consumption data services.

Intuitively, this is unsurprising because power quality data services and other smart meter enabled services are ancillary to the primary service provided by smart meters—that is, consumption data. In a market where these primary consumption services are readily transacting at competitively determined commercial prices, it would be difficult to warrant the full expense and incentive consequences of regulated access to these ancillary services.

These conditions also establish guiderails within which any other regulatory remedies that seek to lower transaction costs through a data exchange framework must be assessed. For the reasons we explain in this section, any regulatory remedy for the identified data exchange problems should:

- not have a cost to implement that exceeds the cost of a third party bypassing the meter provider's infrastructure to duplicate the service itself (for example, installing a network device or obtaining the service from behind the meter technologies)
- not involve costs that exceed the value of the benefits DNSPs or other third parties would derive from the data or service (that is, there must be a net benefit to the regulatory intervention)
- be technology and participant agnostic, providing access to desired services not specific infrastructure.

4. Fit for purpose assessment framework

While we have found that there is unlikely to be a case to pursue a traditional third party access regime involving price regulation or a negotiate-arbitrate regime, there may nonetheless be desirable regulatory measures that could lower transaction costs for sharing power quality data. How these measures are assessed:

- must remain within the guiderails outlined in section 3, and should also
- remain fit for purpose for the AEMC's task in considering measures for a data exchange framework.

To help guide the AEMC in considering options for regulatory measures that target the transaction costs issues, we set out our view of a fit for purpose assessment framework. The assessment approach and assessment criteria are framed in the context within which the AEMC is required to make decisions – that is, having regard to the national electricity objective (NEO) and the long-term interests of consumers. In this regard, it is consistent with the overarching assessment framework for the metering services review, which will be used by the AEMC to assess whether the final package of reforms to the regulatory framework for metering services is likely to promote the NEO and national energy retail objective (NERO).

4.1 APPROACH TO ASSESSING A DATA ACCESS FRAMEWORK

In considering options for an access framework for smart metering data and services in the NEM, we have had regard to:

- the problem definition, framed from a third-party access perspective
- views of stakeholders in submissions and through the working group, and
- the national electricity objective (NEO).
- Although relevant to the regulation of electricity networks,¹⁰ the concepts underpinning the form of regulation factors, and revenue and pricing principles (RPPs), may also be useful when considering the appropriate form of regulation to apply to smart metering data and services in the NEM, and the design of an access framework to ensure it is consistent with the promotion of efficient outcomes.¹¹

4.2 CRITERIA FOR ASSESSING A DATA ACCESS FRAMEWORK

In line with the assessment approach described above, we have developed the following criteria to guide any assessment of options for an access framework for smart meter data and services in the NEM:

- *The data access framework needs to address the **problem*** |
- *The data access framework must deliver **improvements to economic efficiency*** |
 - *productive efficiency* – the framework should support the provision of smart metering data and services at least cost (thereby promoting efficient operation of electricity services)

¹⁰ The form of regulation factors and the revenue and pricing principles (RPPs) are also critical concepts applicable to the National Gas Regime.

¹¹ In addition to the NEO, there are two other critical components of the national electricity framework to which the AEMC must have regard (in certain circumstances) when making decisions. These are: the form of regulation factors, which influence the form (and extent) of the regulation to which electricity networks will be subjected; and the RPP, which influence the maximum price or revenue to be derived from infrastructure which is subject to regulation.

- *allocative efficiency* – the framework should support services being directed to their highest value use (thereby promoting efficient use of electricity data services)
- *dynamic efficiency* – the framework should support and incentivise innovation and investment through new or improved processes, organisational arrangements, products and services, by both service providers and access seekers (thereby promoting dynamic efficiency)
- *The data access framework must **minimise costs** to service providers and access seekers |*
 - administrative cost associated with establishing the data exchange framework
 - ongoing costs, including administrative and compliance costs, associated with participation in the data exchange framework
 - time to implement the data exchange framework, and therefore realise the benefits.

In addition, any access framework for smart metering data and services should be consistent with principles of good regulatory practice. In this case, any framework should be:

- targeted at the problem
- proportionate to the problem, and
- flexible to adapt to future circumstances.

5. A pragmatic alternative option

Having regard to the discussion in sections 2 and 3, and the assessment framework set out in section 4, this section specifies a practical alternative option that targets the source of the problems experienced by market participants in the NEM. Specifically, it provides a regulatory remedy to data exchange transaction costs.

It has been designed to minimise implementation costs and preserve flexibility to adapt to changes in the scope of services sought, the nature of the infrastructure providing those services, and the value of the benefits derived by access seekers. It also recognises that the regulatory remedy for data exchange transaction costs should not impose higher costs than the value of the data or DNSPs' or third parties' standalone cost of data acquisition.

Based on the assessment framework set out in section 4 above, this alternative option is likely to better promote the NEO relative to the four regulatory framework options put forward for consideration by NERA in its report to the AEMC.

5.1 OVERVIEW OF THE ALTERNATIVE OPTION

This alternative option draws pragmatic elements from the NERA options 2 and 3, whilst seeking to address stakeholders' stated concerns.

It would comprise four key default elements and would retain provision for parties to negotiate bespoke arrangements that depart from these default arrangements.

The key default elements of the alternative option are as follows:

- *Governance framework for determining what services should be subject to standardisation* | This would be delegated to a suitable body (for example, like the information exchange committee) to manage the standardised service list and update it over time
- *Access agency* | Clarifying what consents are (or are not) required for services on the standardised service list

- *Standardised items specifications* | Establishing standard formats for data and services that are included on the standardised service list
- *Coordination mechanism* | Agreeing and establishing a default exchange mechanism such as using existing processes (such as the B2B system) or agreed new processes.

Each of the key elements is explored further below.

5.2 OPTION SPECIFICATION

5.2.1 Determining services for standardisation

Possible approach | Establish a governance forum for determining what services should be subject to standardisation. Because the desirable services are likely to vary over time, the specification of the services should not be set out in the rules and should be delegated to a suitable body to manage the third party access service list and maintain the currency of the services for which standardised exchange arrangements are available.

The services that are subject to standardisation should be determined with input from access providers (MCs/MDPs) and potential access seekers (for example, DNSPs, DER providers, consumer representatives) so that standardisation covers the services that are likely to be commonly sought by access seekers.

A candidate body could be the information exchange committee (IEC). The IEC is an existing body established under the National Electricity Rules (NER). It is already responsible for developing and making recommendations on changing B2B procedures. The role and responsibilities of the IEC are defined by the NER, the IEC Operating Manual, and the IEC Election Procedures.¹² The IEC is chaired by AEMO and consists of representatives of DNSPs, retailers, metering parties, consumers, embedded networks and discretionary members appointed by AEMO.

Benefits of this approach | Intuitively, exchange standardisation that is capable of accommodating diversity in the range and scope of services that an access seeker may want to acquire from a service provider will be preferable to one that is overly prescriptive or too narrowly focussed on a particular service. For example, while the AEMC's directions paper has focussed on access to power quality data, there is also evidence of access seekers engaging with MCs to obtain access to load control functionality. Including load control services on a standardised service list may also advance the NEO by avoiding the need for duplicated load control assets.

Given ongoing innovation in technologies and energy business models, delegating standing authority for maintaining standardised service list to a suitably qualified industry body can better accommodate dynamism in the services available from smart meters and sought by access seekers. This will ensure flexibility to new use cases or third parties as such a body and list may be more responsive than regulations written into the NER.

If an existing body like the IEC is used, it can have lower costs and timelines to implement.

¹² Further details of the committee can be found [here](#).

5.2.2 Access agency

Possible approach | The data framework should provide clarity regarding what retailer and customer consents are (or are not) required so that consent requirements are not an inefficient barrier to the provision of these services.

The permitted uses and customer consents could remain as per the existing rules. If further consultation reveals that these customer consent rules are not sufficient for some new services, the governance body maintaining the standardised service list could also maintain a list of permitted uses and required consents.

Benefits of this approach | This approach would:

- overcome current uncertainty around consent requirements observed by stakeholders and the AEMC
- prevent barriers being placed on the use of smart meter services by parties that compete in downstream or upstream markets (for example, behind the meter DER services, network support services, demand response services, and market ancillary services).

5.2.3 Default access items specifications

Possible approach | The task of establishing standard formats for data and services that are included on the standardised service list should also be assigned to an appropriate body such as the IEC or another body with representation from likely access seekers and access providers. As noted in section 3.3 DER vendors have already collaborated to develop industry standards for data collection of behind the meter data, so there may be value in harmonising these or adopting a similar industry-led approach for metering data services.

These standardised formats should be the default, but parties should have the ability to agree to use different formats if they prefer.

Benefits of this approach | The AEMC has identified stakeholder support for and the benefits of data consistency in its directions paper.¹³ This includes that consistency of data form and exchange would likely reduce costs by saving time to integrate non-billing data into third-party systems and limit complexity in providing service outcomes.

Standardised formats that could be used as a default by access seekers and access providers could reduce transaction costs for providing and using metering data. At present, there is a risk that multiple different formats may be used, which could increase costs for both MCs and access seekers. Standardised default formats for commonly requested services could reduce these costs.

Implementing a standard default format but allowing parties to agree on alternatives is best likely to balance:

- the transaction cost benefits of standardisation, and
- the innovation and customisation benefits of allowing parties scope to negotiate different arrangements that better suit their specific needs.

5.2.4 Coordination mechanism

Possible approach | Sector participants could be consulted on agreeing and establishing a default exchange mechanism such as using existing processes (such as the B2B e-hub system) or a new exchange application programming interface (API) like has been used for DER data.

¹³ AEMC, Directions Paper | Review of metering services, 16 September 2021, pp. 69-70.

Parties would be able to negotiate bespoke service sharing mechanisms, but access through the default mechanism for the standardised service list would be specified in a manner allowing easy and replicable adoption across multiple trading parties. This optionality could be implemented in a similar manner to the current arrangements for the B2B e-Hub in the Rules, where B2B parties must use the B2B e-Hub for specified types of communications unless the relevant parties agree otherwise.

This element of the proposal is equivalent to the exchange architecture option 3 assessed by NERA, although with explicit recognition that the costs of implementing an exchange mechanism for non-consumption data could be minimised by utilising existing systems and process.

Benefits of this approach | As with the AEMC's assessment of the equivalent NERA option 3, this approach would:

- address the identified lack of structure for the exchange of data that the AEMC considers is likely limiting the potential value that consumers may realise from smart meter data services¹⁴
- Avoid the need for the party seeking access to negotiate with each data provider to exchange data.

5.3 ASSESSMENT AGAINST OUR FRAMEWORK

As noted above, this alternative option provides a proportionate regulatory remedy to data exchange transaction costs. It has been developed with a focus on minimising implementation costs and preserving flexibility to adapt to changes in the scope of services sought, the nature of the infrastructure providing those services, and the value of the benefits derived by access seekers.

It also recognises that the regulatory remedy to data exchange transaction costs should not impose higher costs than the value placed on that data by access seekers of their standalone cost of data acquisition. Having regard to our assessment criteria, we note the following in relation to the alternative option:

- *Address the problem?* | By combining elements of NERA options 2 and 3, the alternative option will address many of the coordination and consent problems, and hence transaction cost issues and barriers, currently experienced by DNSPs and other parties in the NEM.
- *Likely to deliver efficiency benefits?* | This option supports dynamic efficiency and innovation by being flexible to different use cases and avoiding the need to impose an access regime that is not technology and participant agnostic in how those services are acquired. It supports productive efficiency by lowering transaction costs for participants and thereby making it easier for them to access services as inputs to their own services rather than incurring the costs of inefficient bypass solutions. It is more likely to be allocatively efficient than options that impose a cost to administer that would exceed the value that access seekers place on data services.
- *Likely to minimise costs?* | The extent of costs and time involved in implementing this option would not be substantial, particularly if existing governance forums are used to specific standardised services and existing systems were leveraged to provide the exchange architecture and associated process. Ongoing costs would also be minimised by providing industry a role in establishing, managing and standardising the default access items specifications.
- *Consistent with principles of good regulatory practice?* | This option would be flexible to new use cases, targeted to the key practical problems currently being experienced in the NEM and provide a proportionate response to the problems associated with the transaction costs of access to non-consumption data in the NEM.

¹⁴ AEMC, Directions Paper | Review of metering services, 16 September 2021, p. 69.

Appendix A National Access Regime

Part IIIA of the Competition and Consumer Act 2010 establishes Australia's legal regime to facilitate third party access to certain services provided by means of significant infrastructure facilities. One of the objects of Part IIIA is:

to promote the economically efficient operation of, use of and investment in infrastructure by which services are provided, thereby promoting effective competition in upstream and downstream markets.

The National Competition Council (NCC) is responsible for declaration of services which may then become subject to regulated access terms. It says of the National Access Regime:

Commercial negotiation is the preferred means to determine the prices and other terms and conditions of access to services provided by infrastructure or other facilities. Where services are available in a competitive market environment, access to those services can be expected to be provided efficiently and at an appropriate competitive price. In this situation, access regulation is generally unnecessary.

However, in some circumstances there may only be one facility that provides necessary infrastructure services and it may be uneconomical to duplicate such a facility. Where competition in related markets depends on access to such services, competition in those markets is likely to be significantly constrained with consequential losses in efficiency and innovation.

The National Third Party Access Regime in Part IIIA of the CCA seeks to ensure that nationally significant natural monopoly facilities are shared on reasonable terms and conditions where this would materially promote competition and would promote the public interest.¹⁵

The criteria to be met in a declaration decision are set out in ss 44CA(1) and 44H(4) of the CCA:

(a) that access (or increased access) to the service, on reasonable terms and conditions, as a result of a declaration of the service would promote a material increase in competition in at least one market (whether or not in Australia), other than the market for the service

(b) that the facility that is used (or will be used) to provide the service could meet the total foreseeable demand in the market: (i) over the period for which the service would be declared; and (ii) at the least cost compared to any 2 or more facilities (which could include the first-mentioned facility)

(c) that the facility is of national significance, having regard to: (i) the size of the facility; or (ii) the importance of the facility to constitutional trade or commerce; or (iii) the importance of the facility to the national economy

(d) that access (or increased access) to the service, on reasonable terms and conditions, as a result of a declaration of the service would promote the public interest.

¹⁵ NCC, Access to Monopoly Infrastructure in Australia | National Third Party Access Regime (Competition and Consumer Act 2010, Part IIIA), December 2017, p. 2.

Appendix B NERA options assessment

This appendix briefly describes the four options put forward by NERA for consideration by the AEMC. It then provides a high level assessment of the four options in line with the assessment approach outlined in section 4 and the guiderails we identified in section 3 of this report.

B.1 NERA OPTIONS FOR DATA ACCESS

In its report, NERA set out four options for a regulatory framework for data access, for consideration by the AEMC. These options were informed by a set of case studies for how data access is managed in other jurisdictions and sectors. The options put forward by NERA are as follows:

- *Option 1* | Establish a data communications organisation - similar to the Smart Data Communications Company (DCC) in Great Britain (GB) - and mandate the types of data that must be provided through it.
- *Option 2* | Set minimum standards for bilateral engagement between retailers and DNSPs but allow for additional commercial engagements beyond the minimum standard.
- *Option 3* | Establish an exchange architecture (for example, application programming interface (APIs)) with defined roles but allow parties to participate freely within it.
- *Option 4* | Establish a negotiate-arbitrate framework, where arbitrators are subject to guiding principles when making a determination.

As noted by NERA, these options differ in their level of prescription, and hence reliance on commercial negotiation.

The extent to which each of the options promotes the long term interests of consumers will ultimately depend on their detailed design and whether they are implemented in isolation or as part of a broader package of reforms targeting each of the practical problems experienced in the NEM.

B.2 ASSESSMENT OF OPTIONS

Option 1 – DCC-style organisation

Option 1 would involve establishing a new monopoly company that manages all smart metering data and communications, similar to the DCC in GB. Under this approach, metering data providers (MDPs) would cease to exist as a competitively appointed role and a single MDP would be appointed by all MCs. The single MDP would be subject to prescriptive rules around the data it would be required to collect, over what interval and at what reporting frequency. There would be no explicit price associated with data access. Rather, DNSPs and other parties would seek access to the centralised pool of data if the value they could obtain from it exceeds its cost of processing it. A new mechanism would need to be developed for recovering the DCC's costs from energy consumers or taxpayers instead of the current arrangements where the MDP's costs are paid by the appointing retailer.

This option is the most prescriptive of the four options put forward by NERA and is likely to come at the greatest cost to consumers and consequences to the pace of smart meter deployment, with questionable benefits. As evidenced in submissions to the AEMC, MCs are already providing smart metering data and services to other parties, including power quality data to DNSPs. The DCC is not currently providing any data other than consumption data. A NEM version of the DCC would presumably have a wider remit to collect and share more data, but that would likely involve costs that are even higher than the DCC's costs.

In this context, option 1 is unlikely to provide a proportionate response to the practical problems being experienced by access seekers in the NEM.

In addition, this option would likely require changes to the National Electricity Law to enable both the creation of the new centralised organisation and the recovery of its costs, and the AEMC to make rules imposing regulation on that organisation. Legislative changes of this nature can take several years to enact, meaning the benefits of this option would be unlikely to be delivered quickly.

Having regard to our assessment criteria, we note the following in relation to option 1:

- *Address the problem?* | The establishment of a centralised data manager with prescriptive data access obligations would address the coordination problem and reduce transaction costs associated with having to negotiate access with multiple MCs and process the same data types in different formats from different providers. It would also address the issue of consent, where the information to be provided through the organisation is mandated.
- *Likely to deliver efficiency benefits?* | The ability of the centralised organisation to deliver efficient outcomes would largely depend on the design of the regulatory framework supporting this option, including the strength of incentives on the organisation to efficiently manage its costs while delivering an appropriate quality of service to access seekers. It does not necessarily support innovation in how data is obtained, particularly if it is only applied to metering providers (see section 3.3).
- *Likely to minimise costs?* | Establishing a new centralised organisation to manage access to smart metering data and services is likely to involve substantial one-off and ongoing administrative and compliance costs. As outlined by NERA, the total costs of the DCC in GB are equivalent to around AU\$1.2 billion a year to provide the same consumption data currently provided by MDPs in Australia as part of their standard metering service.
- *Consistent with principles of good regulatory practice?* | This option is the most prescriptive of the four options considered by NERA and would only likely be appropriate where a substantial market failure was identified.¹⁶ It would also be difficult to impose on an existing competitive market as in the NEM, rather than being established at the start of a new market as in GB. Given the nature of the practical problems identified in the NEM, this option is unlikely to represent a targeted or proportionate solution.

Option 2 – minimum contents requirements

Option 2 would involve mandating MCs to provide a minimum level of data to DNSPs and other parties. Any additional data not mandated could then be obtained from an MC through a process of commercial negotiation. The option put forward by NERA did not contain detail around whether access to the minimum level of data would come at a cost to access seekers and if so, how the price would be determined. NERA did, however, reference a model proposed by South Australia Power Networks (SAPN), which classifies data into three tiers, as one possible model that could be considered.¹⁷ In this model, data specified in the first tier would be provided to DNSPs free of charge, while data specified in the other two tiers would be subject to a negotiated price.

¹⁶ The AEMC has identified that the price of data access is exceeding its value. It is important to be clear if the prices are exceeding costs before considering any regulatory interventions for this issue. No analysis of this has been provided by the AEMC so far. If the price of the data reflects its costs, then this suggests there is no market failure. If the costs of data access (including provision and compliance with any regulation established to support that provision) exceeds its value, then the services shouldn't be provided.

¹⁷ Under the SAPN model, data specified in the first tier would include, for example, technical data on five-minute intervals provided every 24 hours. Tier 1 data would be provided for free. Data specified in the other two tiers would include, for example, technical data provided more frequently than daily. Access to this data would be optional and subject to commercial negotiation.

Having regard to our assessment criteria, we note the following in relation to option 2:

- *Address the problem?* | While mandating the provision of a minimum level of data by MCs to DNSPs and other parties may address some of the coordination, consent and transaction cost problems identified in the NEM, the need for access seekers to negotiate with MCs for data above the minimum levels would continue to be problematic if not supported by other mechanisms to address these problems. Further, the extent to which this option addresses the problems depends on the level of data that is mandated and how flexible the regime for determining what data is mandated in each tier is. Imposing a requirement to provide data free of charge or at a regulated charge does not seem to be justified by the identified problems, ie there is no evidence of MCs refusing to provide this data at competitive prices.
- *Likely to deliver efficiency benefits?* | It is not clear how prices for access to the minimum level of data would be set (if at all) under this option, noting that for efficient outcomes to be delivered, the prices should reflect the marginal cost of data or service provision or be directed to their highest valued use. Mandating the free provision of data would not be efficient given that MCs would incur initial and ongoing costs in providing that data. The free provision of data would also exacerbate the ‘split incentives’ issues identified by the AEMC and lead to inefficient outcomes and deter an efficient rollout of meters by increasing the costs of metering services that are ultimately borne by retailers. The price for access to data above the mandated minimum levels would be determined through commercial negotiation between MCs and DNSPs and other access seekers. As noted above, without additional mechanisms to address some of the existing issues associated with negotiating access to smart metering data, this option is unlikely to result in improvements in efficiency relative to the status quo.
- *Likely to minimise costs?* | The costs of establishing this option would likely be relatively low and, unlike option 1, would not involve costs associated with establishing new entities or roles. To ensure ongoing costs were minimised, the mandated minimum level of data would need to be carefully determined and, where possible, standardised across MCs to reduce the costs to DNSPs and other parties associated with managing multiple data sources and frequent data transmissions.
- *Consistent with principles of good regulatory practice?* | By enabling parties to negotiate access to data and services beyond minimum levels, this option represents a flexible approach which could adapt to changing circumstances. However, if implemented in isolation, this option is unlikely to provide a targeted solution to the problems identified in the NEM. Imposing price regulation, or mandating the provision of services for free, would be inconsistent with the form of regulation factors and the revenue and pricing principles under the NEL.

Option 3 – Exchange architecture

Under option 3, DNSPs and MCs would interact with each other and transfer data through a pre-defined communications structure (for example, through APIs) and with partially defined contracts. It would not include a prescriptive list of which data must be provided, and at what price. At a minimum, this option would comprise a standardised communications interface where MCs would upload power quality data (and potentially other smart metering data) and DNSPs or third parties would download that data. It would also comprise a semi-standardised set of contracts that could be adapted for the specific nature of a data request.

NERA suggests that DNSPs would be the logical parties to develop and maintain the exchange architecture on the basis that DNSPs would be the parties using the data, and costs could be recovered through DNSPs existing regulatory processes. However, this approach may not be appropriate where access to smart metering data is sought by parties other than DNSPs, and where access extends into other smart metering services (eg like load control).

Having regard to our assessment criteria, we note the following in relation to option 3:

- *Address the problem?* | The standardised communications interface may help to reduce some of the coordination issues associated with DNSPs and other parties having to negotiate access to data with multiple MCs. The establishment of semi-standardised contracts with agreed terms, accessible through the exchange architecture, could also help to reduce some of the transaction costs associated with the current regime. However, the extent to which this option addresses the problems will largely depend on the details of its design, including how MCs are incentivised to participate in it, who is responsible for the exchange architecture, how many different types of exchange architecture are established etc. It is also not clear how this option would address the practical issue of consent, but we assume that it could be specified to do so. NERA's proposal that DNSPs would maintain the exchange architecture would not address the transaction costs problem for parties other than DNSPs. NERA proposes that each DNSP would impose its own exchange architecture, which would also not address the transaction costs problem because it would still result in MCs needing to interact with up to 13 different systems used by different DNSPs.
- *Likely to deliver efficiency benefits?* | NERA notes that this option would not prescribe which data must be provided and at what price. Price would largely depend on the specific nature of the data request made by DNSPs or other parties, and the incentives on MC to agree a price for data access that reflects the efficient costs of its collection and provision. If it resulted in different exchange systems for each DNSP as proposed by NERA, it would be unlikely to deliver material efficiency benefits.
- *Likely to minimise costs?* | The extent of costs involved in implementing the exchange architecture would also depend on several factors, including configuration of the architecture (driven by factors such as functionality and security requirements) and the number and different types of exchange architecture that are established. As noted by NERA, ongoing costs are likely to be relatively low as data would only be collected and provided on request. Although not mentioned in the NERA report, leveraging existing systems would be one way to reduce implementation costs and increase the speed of implementation.
- *Consistent with principles of good regulatory practice?* | This option would be flexible to new use cases, to the extent that the backend systems are able to support a wide range of data requests. If implemented in isolation of other reforms however, this option would be unlikely to target the key practical problems currently being experienced in the NEM. In addition, whether this option represents a proportionate response will depend on the details of its design.

Option 4 – Negotiate-arbitrate regime

Option 4 would provide a framework within which MCs and DNSPs could negotiate access for whatever streams of data are most valuable. If the negotiation breaks down, this option will provide recourse to arbitration. Arbitrators would be given a set of principles to follow when making a decision but would have considerable discretion in their application. NERA notes that, for this option to be effective, DNSPs and MCs would need to negotiate a standard agreement unrelated to any one data request, on which they could fall back if an MC exerts market power in a narrower context.

This option is modelled on the recently reformed Australian gas access regime. In gas, the availability of both a lighter-handed and a stronger regulatory approach is established in the National Gas Law as part of the economic regulatory framework for pipelines. It recognises that the form of regulation for particular pipeline services should be proportionate to the degree of market power that is involved. Recent and currently proposed gas reforms mean all pipeline services are subject to default third party access regulation unless an exception is granted in limited circumstances.

This is very different to the current competitive market for metering services. It reflects the significant scale of monopoly gas pipeline infrastructure and uneconomic bypass costs compared to the equivalent costs in metering services.

While there are likely to be benefits in providing some structure to support commercial negotiations between smart metering data and service providers and seekers, option 4 is unlikely to provide a proportionate response to the practical problems being experienced by access seekers in the NEM. Our analysis of market power in section 3.1 shows that non-consumption meter data services are unlikely to have strong market power.

Like option 1, implementation of option 4 would require changes to the NEL to provide the AEMC with the power to make rules imposing access (or price) regulation on persons other than network service providers. Changes would also be needed to enable the AER to regulate prices or resolve access disputes for services other than network services. These changes would be extensive and would take many years to develop and implement – as a comparison, the gas negotiation-arbitration regime involves around 200 pages of detailed provisions in the national gas law and rules and the recent amended regime took over 4 years to develop. Legislative changes would therefore limit the extent to which the option could deliver benefits quickly.

Having regard to our assessment criteria, we note the following in relation to option 4:

- *Address the problem?* | Access regulation through a negotiate-arbitrate regime is usually only imposed for natural monopoly infrastructure where there is clear evidence of market power. There is no evidence of such a problem for metering services that justifies this type of regulatory response. The certainty provided by a formal negotiate-arbitrate framework, and its emphasis on information transparency, may reduce some of the transaction costs associated with negotiating access to data in the NEM. However, the model continues to emphasise commercial negotiation as the means of delivering access. If implemented in isolation, this option would be unlikely to address the coordination problems (and costs) arising from the need to negotiate with multiple MCs. It would also be unlikely to resolve the issue of consent.
- *Likely to deliver efficiency benefits?* | This option would result in significant costs that may deter investment and innovation and damage dynamic efficiency.
- *Likely to minimise costs?* | Legislative changes aside, some costs would likely be incurred establishing a negotiate-arbitrate regime in respect of access to smart metering data and services. The key information disclosure/compliance/transaction/administrative costs are likely to be made up of costs of potential access disputes, and any costs of complying with additional provisions (for example, reporting on access negotiations). The costs of an arbitration would be very large and are likely to exceed the value of the services for most users.
- *Consistent with principles of good regulatory practice?* | It would not in our opinion be good regulatory practice to apply a mandated third party access regime of this form to assets that do not demonstrate strong monopoly market power. While there are likely to be some benefits associated with providing structure around the process of negotiation between access providers and seekers, option 4 is unlikely to provide a proportionate response to the practical problems being experienced in the NEM, not least because of the legislative changes that would be required to implement it.