INTELLIHUB GROUP

SUBMISSION TO THE AEMC REVIEW OF THE REGULATORY FRAMEWORK FOR METERING SERVICES DRAFT REPORT

2 February 2023

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Intellihub strongly supports the AEMC's draft recommendations for a target of universal access to smart meters for all customers by 2030. This target will significantly accelerate the deployment of smart meters and deliver major benefits to consumers. We are confident that this target is achievable and that we can engage and train sufficient new meter technicians by the proposed accelerated deployment start date of 2025.

We agree with the AEMC that the most effective mechanism to implement this target is for DNSPs to develop legacy meter retirement plans in consultation with other stakeholders. This approach is likely to lead to the most efficient rollout and deliver a target that is clear and enforceable, including annual interim targets that ensure the accelerated deployment stays on track.

We also support the AEMC's various draft recommendations on improving the meter installation process, which will help reduce costs and deliver a better installation experience for customers.

We agree with the AEMC that the benefits of an accelerated smart meter deployment would be enhanced by reducing the current barriers and transaction costs to providing power quality data to DNSPs. We support the draft recommendations to enable access by DNSPs to power quality data services with standardised formats and exchange mechanisms but commercially negotiated prices. We will incur additional costs in providing these services and agree that DNSPs, as the beneficiary of the service, should pay for this data and that the price should be commercially negotiated.

While we agree that remote access to real-time data services could provide benefits, we do not consider that regulation of these emerging services is justified. Our meters are already capable of providing remote real-time data and retailers are already offering a range of near real-time services to customers. The AEMC's options for access to local real-time data would create significant extra costs and risks, including major cybersecurity risks. The competitive metering market has been extremely effective in recent years in developing innovative new services that benefit consumers and the broader energy market. Outcomes for consumers will be better if the market continues to be free to develop the services customers want rather than regulation dictating the design of services and making all customers pay for functionality most of them will never use.

The Intellihub Group is an Australian and New Zealand based utility services company that delivers innovative metering and data solutions to maximise digital and new energy services. We are Australia's leading provider of smart metering services.

We have been participating in the AEMC's metering review since its commencement in December 2020, including as a member of the stakeholder reference group and various working groups. We thank the AEMC for its extensive stakeholder engagement during the review. We would be happy to meet with AEMC staff to discuss any of the issues raised in this submission.

The AEMC's recommendations for an accelerated smart meter deployment will deliver significant benefits to consumers

We strongly endorse the AEMC's recommendations for a target of universal access to smart meters for all customers by 2030. This target will significantly accelerate the deployment of smart meters and deliver major benefits to consumers.

Smart meters are a key enabler for the transformation and decarbonisation of the energy sector. They deliver significant benefits directly to consumers through their ability to enable consumers to access new services including a wide range of consumer energy resources (CER) and to better understand and manage their energy usage and costs.

An accelerated smart meter deployment will also deliver benefits to a range of other parties including retailers, distributors and AEMO. We are already partnering with retailers and distributors to deploy smart meters and share the benefits they can provide. We are also using our smart meter technology to help AEMO and distributors manage system security issues in South Australia. These benefits will increase materially as a higher penetration of smart meters enables us to provide a wider range of services and data.

The Oakley Greenwood cost-benefit assessment attached to the AEMC's draft report is useful to show that an accelerated smart meter deployment has net benefits even when only a very narrow set of benefits are included. However, we consider that assessment to be very conservative as it focusses on the traditional benefits smart meters provide to retailers, such as avoided meter reads and remote re-energisation. While those benefits are important, we expect that a higher penetration of smart meters will enable a much greater range of services with significantly higher benefits for consumers, retailers and distribution network service providers (DNSPs). These additional benefits include new retail products and tariffs such as 'solar soaker' tariffs, real-time visibility of consumption and CER, enablement of VPPs, fault detection and outage information, and better grid visibility that enables reduced network augmentation and maintenance expenditure.

The proposed 2030 target is achievable

We are very confident that a target of universal smart meter coverage by 2030 is achievable.

We expect that the main issue we will need to manage to meet the proposed target will be labour supply of meter technicians for undertaking installations. We are comfortable that we can engage and train sufficient installers and scale up the number of installations to meet the targets.

We acknowledge that Australia is currently experiencing labour supply challenges across many parts of the economy and that a large number of installers will be required for the accelerated deployment. However, our analysis is that a 100% by 2030 smart meter deployment target would only require the metering industry to engage around 1.5% of current licensed electricians.

We already have extensive field coverage across NSW, the ACT, Queensland, South Australia and Tasmania. Existing electricians can become approved meter installers relatively easily and quickly, only needing to undertake a short training course and onboarding process. Our experience is that

we can go from advertising a meter technician role to having the new technician commencing meter installations within 3 months.

Labour supply challenges may be more acute in some parts of the NEM, particularly regional areas, but we consider that these issues are still readily manageable. This view is supported by our current experience in Tasmania. Labour supply for electricians in Tasmania is more challenging that in most other NEM regions, but we have been able to engage and train sufficient installers to be on track to complete a 100% accelerated deployment of smart meters in Tasmania by 2025.

We also note that smart meter deployment rates have started increasing in the last 6 months, meaning that the required ramp up in resources including trained installers has already commenced. Our deployments have nearly doubled in the last 2 years. We expect that annual deployment rates will need to double again to meet the AEMC's proposed targets. We consider that increase to be readily achievable and are already half way there on a percentage basis compared with volumes from 2 years ago.

The supply of smart meter equipment will not be an issue for an accelerated rollout. The Australian market's total demand is estimated to represent less than 1% of annual production of smart meters by suppliers globally. The AEMC's decision not to make material changes to roles and responsibilities also means that agreeing or amending contractual agreements will not be an issue, noting we already have agreements with almost every retailer in the NEM that cover over 99% of customers.

As noted in the AEMC's draft report and experienced in other jurisdictions, there may be a very small tail of customers who do not have a smart meter by the 2030 target date due to reasons such as the customer not undertaking required remediation work, but all customers would have the opportunity to have a smart meter installed by that date.

In response to question 1 in the draft report:

- We strongly support the acceleration target of universal uptake by 2030 and consider this target is realistic and achievable.
- We consider that it is critical that this target is set out in the National Electricity Rules (NER). The target should be implemented through new NER provisions governing the development and approval of the legacy meter retirement plans and obligations on retailers to replace meters to meet the annual targets set under those plans. In this way, the target will not just be a symbolic target, but the basis for enforceable obligations that all parties can have confidence will be met.
- Setting the target should not be left to jurisdictional frameworks. Leaving it to jurisdictions would inevitably lead to delays as each jurisdiction would need to develop and implement its own legislative or regulatory changes to set the target. It would also risk different targets being set in different jurisdictions, which would undermine the efficiencies that can be delivered by a consistent approach across jurisdictions.
- We do not consider that interim targets in the NER are necessary. The AEMC's proposed approach to implementing the legacy meter retirement plans will deliver annual targets for each year from 2025 to 2030 under those plans.

The acceleration reforms should be implemented as soon as possible and more detail on the proposed implementation process and timeframes would be beneficial

We support implementation as soon as possible of the draft report's recommendations to accelerate smart meter deployment and improve the installation process.

The draft report does not explain the expected process and timeframes for implementing the recommendations. It would be very useful for the final report to contain a comprehensive implementation chapter explaining the various actions that need to be taken to implement the recommendations, who is responsible for each action, and the recommended sequencing and timing for those actions.

We appreciate that the timeframes are not certain at this stage as rule changes will be needed. Changes to AER guidelines and AEMO procedures may also be needed. DNSPs will also need to develop and consult on their legacy meter retirement plans, which will need to be approved by the AER. We consider that these plans should be approved and in operation by 1 July 2025 at the latest, and preferably earlier. This would require final rule change decisions to be made in mid 2024 at the latest.

We agree that legacy meter retirement plans are the most efficient mechanism to meet the target

The draft report proposes that the smart meter deployment target be implemented through legacy meter retirement plans that are developed by DNSPs in consultation with retailers, MCs, governments and other key stakeholders and approved by the AER. We agree that this is the most efficient and certain mechanism to achieve the target.

Legacy meter retirement plans developed by DNSPs in consultation with stakeholders are likely to be a much more effective mechanism than the other 3 options discussed in the draft report. Retirement plans are the option that is most likely to maximise the benefits and minimise the costs of the accelerated deployment.

The collaborative approach to developing these plans will best utilise the strengths and information held by each of the relevant parties. DNSPs have the best information on the status and location of legacy meters. DNSPs will also have valuable insights into the areas of their networks that would benefit from an earlier deployment of smart meters, eg to replace aging distribution load control equipment, target areas with greater safety or reliability risks, or enable more efficient changes to manual meter reading routes. Retailers will have insights into which customers are most likely to benefit from smart meters and where an accelerated deployment can deliver the greatest consumer benefits. Retailers and MCs are best placed to plan, manage and resource the deployment of smart meters and provide information on how to sequence the rollout in a way that increases efficiencies and reduces installation costs. Consumer representatives will have useful insights on equity and cost issues related to the speed of the rollout and which types of consumers or geographic areas are targeted first. Combining the knowledge and perspectives of these different groups will help maximise the benefits and minimise costs.

We also agree with the AEMC's comment that an 'advantage of this option is that it provides parties involved in the meter replacement process with greater foresight of the forthcoming retirements, thus enabling them to plan and deliver required replacements'. This option is also likely to be the most certain means of achieving the target, with clear interim annual targets developed as part of the plans and clear obligations and enforcement powers.

We support the AEMC's comments on page 43 of the draft report that:

> *The Plan would set out an annual schedule of meters to be retired each year in order to meet the 2030 target. This approach would provide flexibility for different approaches to be adopted for each network area. For example, key stakeholders may agree to complete the accelerated deployment before the 2030 end date, while others may choose to retire an equal number of meters each year until 2030.*

In response to the AEMC's question 2:

- We strongly support legacy meter retirement plans as the most appropriate approach for accelerating the deployment and consider that this approach is feasible.
- We agree with the AEMC's proposed principles to be followed in retiring legacy meters set out in Box 4 of the draft report. However, we recommend adding a principle that makes it clear that 2030 is the latest date that plans must target universal deployment by and the plans could target completion of the deployment by an earlier date if supported by stakeholders.
- The 2030 target and DNSP retirement plans need to be implemented by new NER provisions that include binding obligations on retailers to replace legacy meters in accordance with the annual targets under the plan as discussed above.
- We support the AEMC's recommendation that retailers and metering parties would have a 12 month period to replace the group of meters that are to be retired each year under the plan, with those meters treated similarly to the current process for family failure meter malfunction replacements except that the timeframe for replacement would be 12 months. We also support the AEMC's proposal to enforce this replacement process with provisions similar to the current NER clauses on installation timeframes, including we assume similar civil penalty provisions. We also agree that the proposal for public reporting by retailers of their progress in upgrading the retired meters will be valuable.

In response to the AEMC's questions 3 to 5:

- Option 2 (a retirement schedule in the rules or AER guidelines) would be difficult to implement, would be inflexible and would not enable stakeholders to target the deployment in a way that maximises the benefits.
- Option 3 (a retailer target) could be workable, but did not have strong support in stakeholder reference group meetings. The AEMC also correctly identifies several complications in relation to customer churn and retailer entry and exit that mean legacy meter retirement plans are likely to be easier to implement than this option.
- Option 4 (a metering coordinator (MC) target) would be unworkable. As the AEMC notes in the draft report, MCs have no rights to replace meters and are reliant on appointment by the relevant retailer so would not have the ability to deliver on the target.

We support the AEMC's recommendations on improving the installation process

The draft report makes a series of recommendations related to reducing barriers to installing smart meters, improving industry coordination and improving the customer experience in metering upgrades.

We support these recommendations and consider that collectively they will help accelerate the smart meter deployment, reduce installation delays and improve the meter installation process for consumers. In particular, we support:

- The proposed process for handling customer site defects.
- The proposed one-in-all-in process and timeframes for shared fuses in multi-occupancy buildings.
- The proposed amended timeframes for family failure replacements.

We would welcome the opportunity to engage with the AEMC further on the detailed design of these new processes, either as part of the development of the final report or the subsequent rule

change process. The proposed one-in-all-in process in particular will need careful consideration of a range of operational issues to ensure MCs can safely and efficiently replace meters at shared occupancy sites where there are a large number of customers with different retailers and MCs.

We support the AEMC's recommendation that governments should provide funding for site remediation issues, particularly for vulnerable customers.

We also support the recommended smart energy website. The Commonwealth Government or the AER are the appropriate parties to operate the website so that it is run by a trusted independent party and can cover all jurisdictions.

We support access by distributors to power quality data with standardised formats and exchange mechanisms but commercially negotiated prices

The benefits of an accelerated smart meter deployment would be enhanced by reducing the current barriers and transaction costs that have made it difficult for MCs to provide power quality data to DNSPs at scale under the current regulatory framework. Easier DNSP access to power quality data can enable more efficient use of distribution networks, improved reliability and system security and better integration and utilisation of CER.

We support the key elements of the AEMC's recommendations on enabling DNSPs to procure power quality data from MCs. Clarifying MC's rights to provide this data to DNSPs, documenting a common data format for a basic power quality service and agreeing on the default mechanism for exchanging this data will deliver material benefits to DNSPs and consumers.

It is critical that the commercial terms for the provision of power quality data services are commercially negotiated between the MC and relevant DNSP. We are pleased to see the AEMC's clear statements in section D1.1.1 and D.1.5 of Appendix D of the draft report and in the public forum that this should be the case for both the 'basic' and 'advanced' power quality services.

We agree with the AEMC that this approach supports an efficient beneficiary-pays model. The provision of these services will impose material costs of MCs, both in terms of initial implementation costs and ongoing data delivery costs. Those costs will need to be funded by someone, and it is most efficient for them to be funded by the party seeking the service (ie the DNSP). That will incentivise DNSPs to make efficient decisions regarding whether they need the service and how much data they need (eg how many meters and how frequently) and to compare the costs of that service with other alternatives. DNSPs should be able to recover the costs they incur to buy power quality data services as part of their AER revenue determination process.

The alternative would be to provide the data to DNSPs at no cost to them, and instead have all of the costs passed on by MCs to retailers and by retailers to customers. That will not result in efficient outcomes and will likely result in overuse of the service and increased costs that need to be passed on to customers.

The provision of free data services to DNSPs would also require complex renegotiations of all of the metering service agreements between MCs and retailers to agree on how the costs would be passed on to retailers under change in law or similar provisions. We have agreements with over 50 retailers that would need to be renegotiated. Other MCs have similar numbers of agreements, meaning that several hundred agreements would need to be renegotiated and amended across the industry. This will be much more complex and costly than negotiating power quality data agreements with a maximum of 7 DNSPs.

Regulated pricing is also not justified. The costs of regulation would be excessive given the relatively low value of the data, resulting in increased costs for MCs, DNSPs, the AER and other stakeholders

that exceed the benefits of regulation compared with commercial negotiation. Regulation of the price of metering data services provided by non-DNSP MCs also appears to be outside of the AEMC's and AER's powers under the NEL.

Requiring power quality data to be provided for free or at a regulated price is also likely to stifle innovation. Implementation of such an approach would require the rules to set out a detailed specification of the free or regulated service, rather than enabling the parties to commercially negotiate the parameters of a service that best suits each DNSP's individual needs. It is also likely to deter the development of new advanced data services, due to the risk that they also become regulated or required to be provided for free in future.

Some stakeholders have suggested that requiring DNSPs to pay for power quality data services will result in consumers 'paying twice' because consumers have already paid for the smart meter through their retailer. This is not the case. Small customers do not currently pay any additional charges for a smart meter, with the retailer and MC funding the installation and the retailer recovering the initial and ongoing costs as part of its standard retail electricity charges. As noted above, the provision of power quality data services will result in additional costs to the MC that need to be funded by someone.

We are already providing power quality services to several DNSPs on a small-scale basis. The prices of those services are relatively low and there is no evidence of monopolistic pricing or market failure that justifies price regulation. There is no reason to expect that prices will rise materially in future, and as demand increases we may be able to reduce prices as we can spread the fixed costs over larger volumes. Competition between MCs will also constrain prices given that most uses for power quality data do not require data to be provided from every meter.

If the AEMC has concerns about the theoretical risk of market power in future, we recommend that the AEMC monitors the market and considers regulation at a future date if there is evidence of monopoly pricing. We would be happy to provide the AEMC with information on a confidential basis to enable such market monitoring.

Implementation of the proposed power quality data services

Some elements of how the AEMC intends to implement this new basic power quality data service in the rules are unclear in the draft report. Our views on how this arrangement should be implemented are:

- We agree with the AEMC's proposal that rule changes to enable MCs to provide power quality data to DNSPs should be implemented though changes to clause 7.15.5 of the NER. This clause should be amended to provide that the MC is permitted to provide power quality data to DNSPs.
- The terms and conditions (including price) for the provision of power quality data services should be commercially agreed between the MC and requesting party, consistent with clause 7.6.1(b).
- The consent requirements for providing data to DNSPs are currently unclear. This lack of clarity is partly due to the wording in clause 7.6.1(b) that MCs may provide metering data and services 'subject to the terms of its appointment' by the retailer. MCs' contracts with retailers also generally require the retailers' consent for the provision of metering data to other parties. It may be possible to amend clause 7.15.5 or 7.6.1 to provide that the consent of the appointing retailer is not required to provide power quality data to DNSPs (which could then be flowed through to the relevant contracts when they are next renegotiated by the parties). Alternatively, if clause 7.15.5 is amended to specifically provide that MCs may provide power quality data to DNSPs, this should make it easier in practice for MCs to obtain the required contractual consents and reassure retailers as to the type of data that will be shared and how it can be used.

- The rules (potentially a new clause 7.10.8 or 7.14A) should provide that, if the MC and DNSP agree to the provision of a basic power quality service, the format and content of the power quality data must comply with the specifications set out in the B2B Procedures or another appropriate document, unless the parties to the transaction agree otherwise. Those format and content requirements should be consistent with the requirements summarised in section D.1.2 of the draft report.

- We expect that the types of power quality services that DNSPs will seek and the capabilities of smart meters will evolve significantly over coming years. As a result, the relevant power quality services should be described at a relatively high level in the rules, with the rules focusing on removing barriers to provision of those services and reducing transactions costs rather than prescribing the details of the services. The detailed specification of the relevant services should be contained in procedures or other subsidiary instruments, or left to contracts, and not set out in the rules themselves. Using a document like the B2B Procedures will be more flexible and enable future changes more easily than needing a rule change for each change to the service specifications. Using the B2B Procedures would also enable changes to be agreed by industry and consumer representatives though the Information Exchange Committee (IEC) process.

- The rules should provide that if the MC and DNSP agree to the provision of a power quality data service, the parties will communicate the data directly and are not required to use the B2B e-Hub. The AEMC should clarify whether power quality data services are intended to be 'B2B Communications' and within the scope of the B2B arrangements in clause 7.17. The B2B e-Hub should not be the default means of exchange of power quality data, but there may be value in using the B2B Procedures and IEC processes to agree and document common transaction formats. This is likely to require rule changes so that these communications can be included within the scope of the B2B Procedures under clause 7.17.3 but the B2B e-Hub requirements in clause 7.17.1 do not apply to them.[1]

- In response to question 13, we do not consider that the rules should include additional variables or other standardised requirements such as service level agreements. It would be preferable to leave those matters to commercial negotiation so the parties can agree on the arrangements that best suit their circumstances.

- The draft report sets out two options for the duration and frequency of the basic power quality service and seeks views on which options stakeholders prefer. Under option 1, data is collected from all meters simultaneously once per day. Under option 2, data is collected from all meters in 6 hour blocks. We prefer option 1 and agree with the AEMC's view that option 1 will result in lower delivery costs. Whichever option is adopted, it is important that the basic service involves collecting data on the same basis from all meters as set out in the AEMC's description of both options. It would be significantly more complex and costly to configure meters so that data was only collected from some meters, or was collected on a different basis from different meters. More customised collection and delivery options could be agreed as part of an advanced service but should not be part of the basic service.

The draft report also briefly discusses the provision of 'additional' power quality data services to DNSPs, including a modified meter inquiry service and a multi-meter ping service. It states that the

[1] The AEMC's draft report states that parties should communicate power quality data directly outside of the B2B e-Hub. However, it then refers to clause 7.17.1(f) as the basis for implementing this arrangement. We do not consider that this clause can be relied on here, as it is only provides that parties may agree to communicate B2B Communications on a basis other than through the B2B e-Hub. This clause only applies in circumstances where use of the B2B e-Hub is the default but the parties to the transaction have elected to use a different mechanism. This approach would make the B2B e-Hub the default and enable any party to compel the other party to use the B2B e-Hub. We understand that it is not the AEMC's intention and the B2B e-Hub should not be the default method of communication.

AEMC will engage with relevant stakeholders between the draft and final report to determine the best implementation pathway for these services.

We support the AEMC's comments that the prices and other commercial terms for these additional services would be commercially negotiated between the relevant MC and DNSP. We would appreciate the opportunity to discuss arrangements for these services with the AEMC and other stakeholders through the power quality data working group or separate meetings. If the detailed specification of the basic power quality service is set out in the B2B Procedures as proposed above, the IEC and B2B Procedures could also determine if these additional services warrant standardisation and set the details of any standardised services, rather than expressly addressing these services in the rules.

The draft report also separately discusses the provision of 'advanced' power quality data services. The boundaries between the 'basic', 'additional' and 'advanced' power quality data services are not entirely clear to us and it would be useful for the final report to clarify or simplify these categories. We strongly support the draft report's conclusion that 'advanced power quality services should be left to commercial negotiations'.

The draft report also raises the possibility of other parties having a right to access to power quality data. Potential access seekers referred to in Table D.1 of the draft report are AEMO and the AER, behind-the-meter service providers, customers and their devices, energy consultants, OEMs, research institutions, retailers and traders.

Provision of power quality data to other parties may have some benefits in certain circumstances, but is likely to be significantly more challenging and costly to implement and it is not clear whether the benefits would outweigh the costs. The AEMC's proposed approach for the provision of power quality data to DNSPs relies on the party receiving the data being able to accept standardised transaction formats and use an agreed exchange architecture to minimise transaction costs, which many of the parties listed in Table D.1 are not likely to be able to do.

The best way to address the provision of power quality data to parties other than DNSPs may be to:

- amend clause 7.15.5 to remove the current prohibition on the MC sharing power quality data with other parties, with this amendment limited to certain listed parties or certain listed purposes for the use of the data;
- not make any other amendments to the rules to create any right for those other parties to access that data or an obligation on the MC to provide it;
- leave it to the parties to negotiate whether access is appropriate in the circumstances (eg based on the nature of the party seeking access, its intended use of the data and whether it has the customer's consent) and agree on commercial terms for access in accordance with clause 7.6.1(b).

It is not clear what problem the options for reforms on real-time data are seeking to solve

The draft report states that the AEMC 'is considering whether it could make regulatory changes to prepare the market for innovations closer to real-time data that a critical mass of smart meters would otherwise enable in the long term.' The draft report defines real time data to be 'less than five minutes and as close to instantaneous as possible'.

The reason provided for this potential intervention in the market is that 'The Commission could make changes to enable customer access to a (near) real-time data stream sooner than the market would offer because this outcome is among the most persuasive and credible drivers of the shift in sentiment toward smart meters in customers interviewed by Newgate Research Final Report.'

Intervening in a competitive market to require the provision of a new service is a major regulatory step that should be justified by clear evidence of a material problem, evidence that non-regulatory solutions will not be effective, and evidence that the benefits outweigh the costs. The draft report appears to be suggesting that the AEMC is considering making rules to require retailers to provide a specific type of data service to their customers, which appears to be unprecedented under the NER or NERR.

We agree that access to real-time or near real-time data will be valuable for some customers. However, we do not consider that there is sufficient evidence to justify regulatory intervention in this area. The development of these types of new services is best left to the market to innovate and determine what services customers desire sufficiently to justify the costs.

If customers desire this service and it can be provided to customers at a reasonable cost, retailers or other service providers will offer it. Many retailers are already offering near real-time remote data services through a range of apps, as acknowledged in the draft report. We expect that real-time services will evolve over time and become more common where there is customer demand for them. There do not appear to be any current regulatory barriers to retailers providing remote near real-time or real-time data services (using unvalidated data) that the AEMC needs to address.

Our meters are capable of providing remote access to near real-time or real-time data. However, providing an instantaneous real-time remote data access to all customers will greatly increase the amount of data that needs to be communicated by each meter to the MC's systems and then on to the retailer and customer. It will therefore materially increase the cost of data communications. Including this service as a default for all customers will therefore increase the cost of smart metering services, without evidence that all customers actually want this service or have any clear use for the data.

The draft report acknowledges that there would be costs of providing real-time data services and that some stakeholders have raised equity concerns about requiring all customers to fund a service that 'would only benefit a few customers at the expense of the broader customer base.' We agree with those equity concerns.

The draft report states that the AEMC has no information on the level of these costs, but has 'assumed' that they will be less than the potential value of the service. The AEMC claims that a potential benefit of regulatory intervention would be 'bringing forward some incremental costs associated with large-scale real-time systems that retailers would incur when building the new energy service or otherwise eventually'. We do not see how this is a benefit, and in any cost-benefit assessment the net present value of bringing forward costs would be treated as a cost not a benefit. This comment also seems to underscore our main point, which is that the market will deliver these services if they are desired by customers and regulatory intervention to require them to be provided sooner is not justified.

The AEMC proposes 3 options for remote access to real-time data, including an option 3 of promoting cooperation and partnerships to provide these services. This can already happen and does not need regulatory intervention. If the AEMC or market participants consider that there are potential regulatory barriers to providing remote real-time data services, we agree with the draft report's comment that the new regulatory sandbox arrangements would be a useful tool to trial these arrangements and address any regulatory barriers.

If the AEMC did implement a regulatory obligation to provide remote real-time data access despite these concerns, it should make it clear that the service is only required to be offered by retailers on an opt-in basis (ie the AEMC's option 2) and that retailers can charge customers who opt-in an additional fee for provision of the service.

The options for reforms on local access to real-time data are unworkable

The draft report also raises the possibility of local access to smart meters to provide real-time data services. It says the AEMC 'would like to engage with interested stakeholders on whether local access is beneficial, and if so, whether it is possible to overcome the material barriers'.

We consider that the AEMC's proposed options for local access would be unworkable in practice. We agree with the AEMC's assessment in the draft report and comments in the forum that there are significant legal and practical barriers to enabling local access to real time data.

The underlying problem that local access is seeking to address is not clearly set out in the draft report, but appears to be that there are a range of potential use cases where behind-the-meter devices or other service providers may benefit from access to real-time metering data and/or the ability to communicate with the meter. If that is the problem, then remote data solutions are a much more effective and secure solution than local access. Intellihub already offers this type of functionality though its Intelli-Bee product. This type of remote service has many advantages over local access, including far greater protection against cyber security risks

The AEMC notes in the draft report that there are several 'highly prohibitive issues' with local access. We agree that these issues would make the proposed options very difficult, costly and risky to implement. The main barriers to local access are:

- **Many meters do not have a local port that is suitable for real-time data services:** Many smart meters, including the majority Intellihub's current meters, do not have a port that is designed for local access to real-time data. Intellihub's meters have an optical port that is designed for occasional use for firmware updates and manual meter reads using a held-held unit in accordance with *AS 1284.10.2 – Direct Local Data Exchange via Hand-Held Unit (HHU) – ANSI Standard Interface*.[2] This port is not designed for use for a permanent connection to a local device for real-time data collection, as opposed to occasional use by a hand held probe. The port is also very slow and is unlikely to be suitable for real-time data provision. A port for use as a permanent local connection to a meter for communicating real-time data is outside the scope of AS 1284.10.2 and not supported by any relevant metering standards in Australia.

- **Adding a local port will add costs and take time to implement:** If the AEMC was to mandate local access, for example by making changes to the minimum services specification or required metering installation components in the NER, that would take considerable time to implement and comply with. It would require costly hardware and design changes that would increase costs to all customers for a feature we expect 99% or more of customers will never use.

- **Local access creates serious cyber security risks**: Local access would create very significant cyber security risks. Cyber security is a critical issue for MCs and we are subject to extensive cybersecurity requirements. Enabling third party local access to a meter would be inconsistent with cybersecurity requirements and expose us and the customer to significant risks. Meters are usually located outside the customer's premises in an unlocked meter box, making it easy for any person to connect to the port and access data without the customer's or MC's knowledge or consent. The AEMC has proposed that ports would have access restrictions, but there is a risk those restrictions could be bypassed.

- **Current restrictions on access to ports**: As the AEMC notes, local ports can currently only be removed or resealed by a qualified electrician. Customers do not currently have the right to access the ports or hardware inside their meter under the rules, to prevent tampering with the

[2] *AS 1284, Electricity metering, Part 10.2: Electricity metering Data exchange for meter reading, tariff and load control – Direct local data exchange via held-held unit (HHU) – ANSI Standard interface, 2006.*

meter. These arrangements would need to be amended, and new rules developed to protect against unauthorised or unsafe access.

- **Regulating access to ports will be complex and require extensive new rules**: A complex new process involving the customer, retailer, MC and party seeking local access would be needed to grant access and activate or deactivate the port. The rules also do not contemplate a party who is not the customer or its retailer or MC having direct access to real-time data from the meter, and extensive new rules would be required to regulate this access and protect the data, set out customer consent requirements and restrict the purposes for which the data can be used.

- **Any new rules on local access risk would be hard to enforce given many access seekers may not be registered participants**: The only parties who are currently permitted to access a meter are registered participants. Registered participants are subject to extensive obligations under the NER including confidentiality obligations. Many of the parties that may seek local access will not be registered participants under the current rules definitions. Allowing access to metering data by those parties would create significant compliance and enforcement risks and raise a number of challenges around the AEMC's ability to make rules that effectively regulate access and use of data by those parties and the AER's ability to enforce compliance with those rules. Requiring those parties to become registered participants could address this issue, but would require additional rule changes and require AEMO to develop new registration categories and requirements.

Our comments on remote access above regarding the risks of imposing significant costs on all customers for a service that is only likely to be used by a small proportion of customers are also relevant here. We expect that extremely few customers would use a local access service when much more user-friendly remote offerings are already available and more advanced remote services are expected to be available in future.

Requiring local access has parallels with failed aspects of the Victorian smart meter roll out where government mandated that all smart meters have a ZigBee home area network interface for data access and many customers were given 'free' in home displays. These requirements resulted in all Victorian customers incurring material costs to fund technology that was almost never used. ZigBee quickly became obsolete technology and most in home displays were put in drawers and never used, with customers preferring to use cloud-based apps on their mobile phones that were offered by retailers despite no regulatory requirement to do so.

The AEMC should also clarify smart meter inspection requirements to avoid unnecessary costs

Appendix C.6 of the draft report notes several other installation issues that were raised by stakeholders during the review. This list includes the issue Intellihub raised in its original submission to the AEMC's consultation paper for the review regarding changes to testing and inspection requirements for smart meters. However, the draft report does not contain any response to this issue.

Intellihub continues to consider that changes to the rules to clarify the inspection requirements for smart meters are important to avoid unnecessary costs. As explained in Appendix 2 to our original 2021 submission, we consider that type 4 smart meters should only be required to be inspected when tested. This is consistent with the current wording of Schedule 7.6 of the NER. However, AEMO's practice when approving meter asset management strategies has been to instead insist that type 4 meters are physically inspected at least once every 10 years. This would mean 10% of smart meters are physically inspected each year.

We were concerned to see in AEMO's recent Flexible Trading Relationship rule change request that AEMO has included an appendix of proposed metering rule changes that are unrelated to flexible

trading relationships and are not discussed or justified in the rule change request, including a change that would require all type 4 meters to be inspected every 5 years.

AER data shows that DNSPs currently inspect between 0.06% and 1.27% of type 5/6 meters per year. We see no justification for requiring more frequent physical inspections for type 4 meters compared with type 5/6 meters. Indeed, the remote monitoring capabilities of type 4 meters mean there is less need to physically inspect them, not more.

The marginal cost of undertaking an inspection when a meter is tested is close to zero. In contrast, AEMO's proposed approach will require hundreds of thousands of additional site visits per year specifically to inspect meters. This will involve a very high cost that will need to be passed on to retailers and consumers. It could also slow down installation of new smart meters as staff are diverted to undertaking inspections.

We estimate that requiring inspections every 10 years would add $10-15 per customer per year to metering costs. AEMO's recent proposal of requiring inspections every 5 years would double that cost. This additional cost would be greater than the combined cost savings the AEMC is seeking to achieve through the other installation reforms proposed in the draft report and undermine those reforms.

We would be happy to discuss this issue with the AEMC and would appreciate the final report addressing the issues we raised in our previous submission.

If you have any questions regarding this submission please contact Jonathan Hammond, Executive General Manager Strategy and Corporate Development on 0431 885 092 or jonathan.hammond@intellihub.com.au.

Regards

Wes Ballantine
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Intellihub