13 November 2024

Ms Anna Collyer
Chair
Australian Energy Market Commission
Via online portal
Ref: ERC0399

Dear Ms Collyer,

PLUS ES submission re Real-time data for consumers Consultation Paper

PLUS ES welcomes the opportunity to provide feedback to the Australian Energy Market Commission's (**AEMC)** Consultation Paper on Real-time data for consumers (Ref: ERC0399).

PLUS ES is a registered Metering Co-ordinator (**MC**) and an accredited Metering Provider (**MP**) and Metering Data Provider (**MDP**) in the National Electricity Market (**NEM**). Our skilled, workforce provides metering services across Australia, and supports Consumer Energy Resources (**CER**) deployment. We provide metering services through retailers and directly to customers ranging from small residential customers through to Australia's largest manufacturers and mining operators.

PLUS ES's submission supports the following key points below:

- **Giving consumer choice through provision of real-time data** – We support the provisioning of real-time data and AEMC's position that the Rules should require market participants to deliver a set of access outcomes. This includes ensuring that access outcomes:

  o Provide flexibility to market participants, consumers and their representatives to agree on the most efficient pathway to provide data access to meet the needs of any particular use case;
  o Allow consumers choice in how they operate or manage their CER; the channel through which they access their data should not prevent a customer from accessing products/services from other service providers; and
  o Allow for technological advancement and an evolving energy landscape by being technology agnostic.

- **Promoting consumer outcomes without being cost prohibitive to the industry** – Whilst PLUS ES supports providing real-time data to consumers, this new functionality will impose additional costs on the metering service provider[1] (**MSP**), including upfront and ongoing variable costs. The AEMC's determinations should:

  o Ensure that MSPs can negotiate the appropriate approach to deliver on the consumer outcomes with their customers or third parties. For example, PLUS ES is in discussions with customers for the deployment of Wi-Fi enabled meters. In this instance the cost of providing this service can be considered by the customer and only purchased where the benefits outweigh the costs;

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[1] Metering service provider has been used as a metering party collective term to include MC/MP/MDP.

- o Provide consumers with choice by recognising that not all consumers will benefit from, or want, real-time data. As such, imposing the costs of facilitating real-time access for all meters may result in expenses that do not deliver a commensurate benefit to all consumers. We therefore recommend that the Directions Paper provides a clear pathway for consumers to access real-time data without mandating it for all meters; and
  - o If mandated and not negotiated with customers, enable a regulatory pathway for MSPs to cost recover/earn a return on investment on delivering this service.

- **Removing barriers or clarifying perceived barriers** to enable real-time data outcomes for consumers, their representatives and market participants, with consumer's consent on who accesses their data. For example, barriers such as the limitations in the National Electricity Rules (**NER**) on when an MC can enter a commercial arrangement (NER clause 7.6.1- Commercial nature of the Metering Coordinator appointment and service provision) or perceived barriers such as NER clause 7.15.5(d)(1), where the customer or their agent can access their metering data upon request to the retailer or the Distributed Network Service Provider **(DNSP)**;

- **Defining technical/interoperable standards** to ensure diverse systems can communicate and exchange information seamlessly to deliver this efficiency; and

- **Enhancing the consumer privacy and security protections** in the existing data access framework to support consumer outcomes, including protecting consumer privacy and security.

Appendix A provides general PLUS ES feedback on the Consultation Paper, and **Appendix B** is a table of PLUS ES's response to the Consultation Paper's questions. In addition to the detail provided in the appendices below, PLUS ES would welcome further discussions in relation to this submission or any other item relating to real-time data. Please contact Helen Vassos on 0419 322 530 or at Helen.Vassos@pluses.com.au.

Yours sincerely,

Rob Amphlett Lewis

Group Executive of Distributed Services and PLUS ES

APPENDIX A – GENERAL FEEDBACK

PLUS ES supports providing real-time data to consumers and provides the following feedback.

Promoting consumer outcomes without being cost prohibitive to the industry

- Not all consumers will desire their data to be available real-time. Consumers could be categorised into three generic groups:

  1. Not interested in receiving the data;
  2. Maintain awareness of their consumption or troubleshoot high energy usage devices on their premises - In most cases making available data within 24 hours or on demand will satisfy the majority of these consumers; and
  3. Invested in real-time data to satisfy specific use cases such as, the terms and conditions they have entered with their retailer or their representative, generally involving CER.

- The existing minimum service specifications (**MSS**) only necessitate that metering installations can perform the functions outlined in Schedule 7.5 of the National Electricity Rules (**NER**). Retrofitting or replacing the large number of currently deployed smart metering assets to support real-time data functionality would significantly increase costs for the industry. Additionally, there are substantial numbers of existing metering assets already in stock and stored for future use. Considering these potential costs to PLUS ES, we recommend the following considerations:

  o Not mandating a retrofit of all the deployed smart metering installations to enable real-time data access. This allows the consumer who desires real-time data to opt into the service, which is a more efficient alternative;

  o Ensuring that any amendments to the MSS that requires re-designing metering assets have a minimum three years lead time, dependent on the changes required;

  o Requiring a technology agnostic approach. We support the AEMC's position that access should be defined by outcomes. Advancements in technology could deliver more efficient solutions than the proposed access to the metering ports which may require an unnecessary replacement of a perfectly functioning metering asset. Flexibility should be available for service providers to deliver the outcomes with least cost options to meet the need of the consumer; and

  o Aligning the definition of 'real-time data' with specific use cases. For example, streaming real-time data to manage and control CER devices or 'on demand[2] near real-time data' - some form of limited streaming for recent and historical metering information.

- Delivering real-time data will impose a significant cost impost on MSPs. MSPs must be able to establish corresponding commercial arrangements for an increased scope of their services requiring additional investment. Additionally, it's essential for MSPs to establish fair compensation models that reflect the costs (implementation and ongoing) associated with delivering real-time data.

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[2] Where the end user requests the data as opposed to unsolicited streaming.

The AEMC have considered that authorised representatives should pay MSPs for new and direct costs incurred to make real-time data available, but not for data collection or production costs. They have also noted[3] that the EU Data Act may provide the basis for a cost allocation framework, which defines direct costs as data reproduction, electronic dissemination, and storage expenses and excludes data collection or production costs.

It is difficult for PLUS ES to provide appropriate commentary in this context or stress test the AEMC's considerations without clear definitions of the key terms, especially if the compensation path could depend on them. Alternatively, if a compensation framework is required, the framework could be as simple as the additional costs incurred to deliver real-time data should be eligible for compensation.

- PLUS ES recommends that real-time data pathways which depend on a metering installation and/or an auxiliary device to transport data via electronic transmission, must as a prerequisite, be telecommunications enabled. This includes having a communication service available and operable where the signal is not attenuated by the surrounding environmental factors. For example, real-time data will not be available if the Wi-Fi network service provider is experiencing an outage or a physical barrier is blocking the signal transfer.

Removal of barriers to enable the access of real-time data.

- PLUS ES shares Energy Consumers Australia's (**ECA**) concern, set out in their rule change request, that some MSPs may not be acting in the customers' best interest, by creating sub-metering monopolies and seeking to lock consumers into using their proprietary solutions. The creation of monopolies is never in the customers' interests, and our view is the provision of metering services and data, should not be used to lock consumers into any additional services, nor should it prevent them (or future consumers at that residence) accessing services from alternative providers. Our function is to provide metering data, underpinned by significant investments in reliable infrastructure for quality data, essential for market settlements and industry services. The implementation of interoperability standards, clarification of data access regulations and robust privacy and security measures will facilitate data accessibility.

- ECA in their rule change request have identified two barriers, 'local access is not permitted under the NER' and 'remote access is difficult to negotiate'. We agree that some clarifications/stipulations are required to improve consumers access to their real-time data. As such, PLUS ES provides the following feedback for the AEMC's consideration on those determined 'barriers'.

Local access is not permitted under the NER

This barrier refers to a third party not being able to directly access the metering installation. PLUS ES does not support granting third parties access to our metering assets' existing ports[4] due to significant safety, privacy and security concerns. To deliver this outcome an open communication port would be required with the below considerations:

- o To incorporate an exposed communication port, with enhanced security requirements, reengineering of the metering asset is necessary. Sufficient lead time must be allowed to

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[3] AEMC, Consultation Paper, section 3.4.1

[4] Existing ports are dedicated to MP/MDP operations, and a customer port was not defined in the Rules. They are located under the terminal covers (secure area) due to the electrical design of the meter.

prepare the asset for market availability. These costs should be considered at the industry level; and

o   A robust framework must be established to safeguard consumer privacy and security. The consumer must be aware that their data is being collected and used. For example, the existing consumer has provided consent for such services but a 'new move in' consumer will not be aware under current regulations and market processes.

Currently the MSP does not have a relationship with the end consumer. This is not necessary for them to fulfill their obligations, as the current Rules and market operating procedures effectively ensure the privacy and security of the metering data while allowing it to be shared with market participants for settlement, billing, and network reliability purposes. Provisioning data directly to the end consumer or consumer representative requires validation to ensure the requestor is authorised to access the data, a process that the MSP current cannot perform on their own, in the absence of the relationship.

Remote communications such as Wi-Fi enablement of the smart meter, is an alternative, with a potentially faster implementation timeframe compared to re-engineering the existing metering asset. Some considerations for this pathway are:

o   The MSP will incur costs to Wi-Fi enable the metering assets and much greater costs to perform a retrofit of the deployed metering assets to this effect, as the solution may have to be implemented via a local visit by a qualified metering electrician. Retrofitting should be an opt in service with a methodology for the additional costs to be recovered;

o   The consumer manages their privacy and security through control of their Wi-Fi password, which also addresses consent for new occupants, as it is assumed that the password[5] at a minimum, will be changed when a new consumer moves in. Equally so, this dependency on a consumer's Wi-Fi password could also be a barrier, as it may lead to the disabling of the data streaming; and

o   Local access via Wi-Fi has its own limitations and does not support all use cases, especially when multiple parties require access to the data or the surrounding environment is not conducive to a Wi-Fi based solution, such as in multi-occupancy, high rise residential buildings.

Remote access may be difficult to negotiate

PLUS ES agrees there are some barriers in the current Rules as identified in the AEMC Metering Review and Accelerating Smart Meter Deployment rule consultation. However, it has been our experience that:

o   Competition encourages innovation, efficiency, and improved customer service as companies seek to attract and retain customers through various strategies, including cost leadership and product differentiation; and

o   Whilst more advanced services are available for participants, the uptake is almost non-existent due to the expectation that the provisioning should be at no direct costs.

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[5] In many instances, it is expected that the service set identifier (SSID), the gateway and the internet provider will change.

Real-time data access requires a more complex infrastructure compared to current market obligations and has a dependency on external service providers such as telecommunication networks, etc, where the MSP may have very limited power in any negotiation. Therefore, PLUS ES recommends:

o   Extensive input is sought from telecommunication service providers and assumptions around their network technological roadmap, bandwidth, geographical coverage, network penetration and costs are stressed tested;

o   Congestion in the network is considered and prioritisation is provided for market settlement and billing data, Power Quality data (**PQD**) (Basic vs Advanced) and real-time data. The dependency is not only on the MSP but also on the telecommunications network; and

o   As per our feedback in the Accelerating Smart Meter Deployment, the AEMC enable a pathway in the Rules for the MSP to provide metering data services and to be able to enter commercial agreements for those services. To clarify that the MSP can enter commercial agreements for the provision of more frequent metering data and Advanced PQD to requesting parties such as other market participants, third parties and consumer agents. Similar to the objective of the current NER clause 7.6.1(b) for metering data.

APPENDIX B – ANSWERS TO THE CONSULTATION QUESTIONS

Questions	PLUS ES feedback
1. What are the benefits of improving access to real-time data?	

a) **What are the anticipated use cases of real-time data?**	There are various anticipated use cases for real-time data, some requiring more frequent data delivery than others, for example:
	
	• <u>A latency no greater than 300 seconds</u>:
	   o Consumer monitoring - Consumers could use this data for example to confirm their current usage and align their consumption with an incentive program offered by their retailer. However, there is some difficulty in identifying a large number of use cases which could not be met with existing 24 hour data for most consumers. It is our understanding from the Victorian Smart Meter deployment that in general the uptake of in home displays was low, and the retention rate was lower again;
	   o Maintain awareness of their consumption or troubleshoot high energy usage devices on their premises; and
	   o Research and development to progress innovative tools and applications.
	• <u>A latency no greater than 5 seconds</u>: Real-time local access data can be used as part of an automated feedback loop for local control to manage CER, such as South Australia's Dynamic Export Envelope control or local battery or EV charge / discharge optimisation.

b) **What is the value of the benefits that flow to consumers?**	Energy data empowers consumers with insights into their energy usage, facilitating the monitoring of patterns and identification of savings opportunities. It supports informed decisions on energy efficiency and allows users to adjust consumption during peak hours to reduce costs by amending their energy consumption behaviour or take advantage of incentive schemes. Additionally, real-time data improves consumer engagement through personalised recommendations and alerts about outages, fostering a better understanding of energy consumption and promoting sustainable behaviour.
2. What are the costs of improving access to real-time data?	
a) **What are the types of costs that would be incurred to improve access?**	To improve access to real-time data to following types of costs would be incurred: • Installing or upgrading/reconfiguring the metering asset and operating systems; • Enabling collection and transmission of interval data at an increased frequency; • Significant communication network costs due to increased data transfer requirements used to remotely collect data; • Ongoing variable costs to maintain connectivity, rectify equipment failure, customer churn, consumer consent, security and cyber security; and • One off cost for solution/solutions implementation.
b) **What is the magnitude of**	The implementation and ongoing operational costs to provide real-time data are substantial and cannot be absorbed by MSPs. Hence why it is important that the determination:

	these costs?	• Enables technology neutral pathways based on outcomes, flexible and commensurate to the need of the consumer; • Supports the implementation of technical and interoperable standards to allow the flexibility, including standardised data formats; and • Enables MPs to enter into commercial arrangements with other market participants as required to recover these implementation and ongoing costs of providing data access.
c)	Who would incur these costs?	Various factors influence the costs associated with implementing real-time data solutions, including the specific technology utilised and the organisations involved in the process. A crucial component of this infrastructure is the metering equipment and technology, for which costs are primarily borne by the MSP. Other businesses have the ability to determine whether to invest in their own systems to benefit from real-time data. They will invest only if there is a positive business case. MSPs should be afforded the same privilege. Additionally, other MSP significant investments may include data management systems, cybersecurity measures, ongoing maintenance, and enabling tools such as applications or portals designed to present the collected data effectively. These enabling tools may also be provided by various stakeholders like retailers, app developers, or aggregators, further adding to the overall cost landscape.
d)	Do the benefits of improving access to real-time data outweigh the costs?	It is difficult to answer this question without identifying all the use cases and assessing the benefits to value them. It is also difficult to determine how much it will cost us or other participants without having a clear scope of requirements. The only way to guarantee that the benefits of real-time data outweigh the costs, is if it is agreed commercially between MSPs and retailers and/or consumer representatives. Hence, it is crucial that requirements meet the demand and align to the outcomes requested. Determinations must enable the ability for providers of infrastructure and services to recover their cost and earn a return on their investment. To do otherwise would undermine the market dynamics that drive incentives for: • Developing innovative products and services, which require ongoing design and testing alongside significant research and development costs; and • Encouraging competition – the access to data will create new use cases and enable the market to introduce fresh service offerings, thereby generating additional opportunities for value extraction.
	3. Do metering parties currently have a competitive advantage?	
a)	Do you agree with the proponent that metering parties have a competitive advantage in providing	Leveraging the consumer's metering installation is more cost-effective, compared to installing and maintaining auxiliary metering devices and systems. This approach enhances market efficiency by reducing confusion from multiple providers offering similar services, minimising waste from frequently updated hardware, etc. These advantages though, are tempered by the costs of data provision, the lack of direct consumer relationships and interpretations of current regulations.

	services not related to their core functions of settlement, billing and maintenance?	However, where MSPs do provide data services to customers, MSPs should not limit consumer choice through commercial models that restrict consumer nominated third party access to data.
b)	How would any competitive advantage impact the costs of new energy services to consumers?	PLUS ES does not believe there is a competitive advantage. There have been significant costs invested in the metering infrastructure to record and disseminate metering data with current market obligations. Additional costs will be incurred to develop the real-time data services. Key market forces such as supply and demand, consumer preferences, and economic conditions affect pricing and product availability. Competition encourages innovation, efficiency, and improved customer service as companies seek to attract and retain customers through various strategies, including cost leadership and product differentiation.
	4. Do DNSPs need more than PQD to improve network planning and operation	
a)	Do the benefits of improving DNSP access to real-time data outweigh the costs?	PLUS ES supports that the costs of enhancing access to real-time data outweigh the benefits for a DNSP. Our position is based on defining access to real-time data as continuous unsolicited data streaming, every 'X'[6]seconds from every meter, year-round, and the substantial costs involved to deliver such a service. For example, the most cost-effective way to provide local access to real-time data for consumers may not be opportune for the DNSP, as this approach could rely on the consumer's technology such as Wi-Fi, as a transport medium. If the consumer disables their Wi-Fi, the DNSP would lose access. Therefore, although the consumer's needs are met, the solution would need to be modified, or an alternative pathway implemented. There may be use cases where the DNSP may have a requirement to monitor the performance of a specific section of their network. It has been shown that this can be efficiently achieved with a controlled approach, targeting a group of NMIs for a specific timeframe without the need for ongoing data streaming. Once that real-time data window has passed, historical data is available through existing daily reports (NEM 12 files), commercial agreements for Power Quality Data, or imminent regulatory provisions related to power quality.
b)	What are the use cases for DNSPs and other network planners to have access to real-	All market participants, including DNSPs, should have access to real-time data[7],on a use case basis, with the provider being recompensed for the service. There is an assumption that outage management is a use case for real-time data streaming as during outages, real-time data is not communicated. However, the status of data delivery is not an accurate indicator of an outage, as other factors such as telecommunication network outages, the consumer turning off supply via the meter isolator or physical barriers interrupting the

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[6] Where the value of 'X' is to be defined to reflect real-time data streaming.

[7] Whilst PLUS ES supports access to real-time data for market participants, the MSP must be compensated accordingly for provisioning this service.

time data other than advanced PQD?	data signal, can also prevent real-time data delivery. Whilst a 'Last Gasp'[8] signal received from the meter can provide a specific degree of certainty that the meter has lost supply, this capability has only been mandated for Victorian and Western Australian jurisdictions. The MSS outlined in the NER, do not require the meter to have that capability.	
	PLUS ES believes that a combination of real-time data and Advanced Power Quality data services would meet the requirements of the DNSP from a network planning, outage management and performance perspective.	
5. Who should have a right to real-time data in the NER?		
a)	**Should consumers, their authorised representatives or any other party, including DNSPs, have a right to access real-time data?**	Consumers and their authorised representatives, including market participants like DNSPs and retailers, should have a right to access real-time data, as long as the providers are appropriately recompensed for the costs of providing the service. To ensure consumer privacy and security, clear guidelines must be established, informing consumers when their data is accessed and requiring their consent, such as during residential moves. Noting, the effort of managing the consent comes at a cost, irrespective of the party undertaking that administration.
		Additionally, it is crucial to assess the benefits of third-party access to real-time data when these parties are not directly representing the consumer, which calls for an access framework with defined provisioning requirements.
6. How should real-time data be defined		
a)	**Do stakeholders agree with the proposed definition of real-time data and customer power data?**	PLUS ES provides the following feedback for the definition of:

- **Real-time data –**
  - Data received instantaneous is too broad and could cause potential conflict between parties due to varying interpretations;
  - Data should be received within no more than 300 seconds –
    - While feasible, it should also consider various handoff points based on the solution, making appropriate allowances from direct obligations;
    - The definition is also too broad;
    - It is an incorrect statement to say it aligns to market Trading Intervals (**TI**) if the assumption is that it accounts for delivery lags as current TI = 5 minutes;
  - The definition, if required, should be flexible enough to accommodate the main use cases identified for sub 300 seconds delivery frequency. i.e. The longer timeframe of 300 seconds will not meet the automated feedback use case requirement if service providers determined that 300 seconds is what they need to achieve; and

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[8] This allows the meter to send a final signal to the utility before losing power, helping them identify outages and improve response times.

		- Market dynamics together with demand and supply, will lead to an organic evolution of the definition of real-time data, as technology advances, without the need to define it in Rules or procedures. If the pathways are enabled, then parties can come to an agreement dependent on each use case. **Customer power data –** - Advanced Power Quality data is being considered in the Accelerating Smart Meter Deployment rule change which would enable a pathway for initiators and service providers to customise tailored services and power data requirements including frequency, as bilaterally agreed, beyond the scope of Basic Power Quality data; - The more channels of information that is configured, recorded and communicated, the greater the impact to the metering asset and the costs increase proportionally to deliver this data; and - The requirement to future proof without valid associated benefits or consumer desirability, imposes a cost burden on the industry. It is our recommendation that the Rules should not future proof requirements but enable parties to request the data if negotiated.
b)	**What should be defined and/or further expanded in AEMO procedures?**	PLUS ES considers the below to be defined or expanded in the AEMO procedures: - Updating the Meter Data Provisioning Procedures; - Standard Data formats – data streams, format and data language; - Technical standards; and - Protocols maximising interoperability. AEMO procedures should not: - Define MSS or solutions which would impose a significant impost on a small number of participants or require significant lead times to deliver and implement especially from a manufacturing perspective; and - Define and impose requirements on market participants which would not apply to independent third parties, skewing commercial advantages to the independent third party data aggregators.
c)	**Should data be validated or not?**	PLUS ES fully supports the EU model where non validated metering data to be made available for real-time dissemination, with the following key points: - Real-time data is not used for billing and market settlements; - No benefits identified to support validation/substitution; - The cost to validate/substitute real-time data would be cost prohibitive: - Upscale internal processing systems to ingest the volume of data; or - Deploy validation/substitution processes to metering head end systems which generally owned by the meter manufacturer; - Real-time data processing will cause congestion and will impact the delivery of market settlements data; and - Validated and substituted data is made available for market settlement purposes and customer billing.

		That said, real-time service providers need to ensure that the data is delivered to the appropriate access party. Whilst we do not support the traditional market validation processes, we do agree that the meter is validated against the NMI and at an industry level the access party is authenticated.

	7. How should real-time data be accessed and shared?	
a)	Do parties, other than metering service providers, need to locally connect directly to the meter to access real-time data? If so, what changes are needed to enable this?	Other parties do not physically require access to locally connect directly to the meter if the MSP is delivering real-time data. Leveraging real-time data from MSPs provides significant advantages over separate solutions for each party. The benefits include: • Consistent and reliable data; • Mitigation of discrepancies between metering data and third-party devices; • Operational efficiency by streamlining access; • Reduces implementation costs to access the data; • Robust privacy and cybersecurity obligations are met; and • A unified approach to energy management and regulatory compliance. Whilst we identify advantages with the above, access to real-time data via the metering installation should not lock in the consumer to products/services accessible via only one pathway. If access to real-time data requires third parties to locally connect to the meter, the following changes will be required depending on the pathways and use cases: • Establishing robust data governance frameworks with clear access protocols; • Advanced encryption methods should be implemented to secure data transmission and storage from unauthorised access; • Users must have control over their data, with the ability to consent to what information is shared; • Regular audits and compliance checks are necessary to adhere to privacy standards; and • Educating stakeholders on data privacy practices will help create a culture of security and trust. **Physical connection to the meter:** Current metering assets do not provide the access for third parties to connect physically to the meter via a safe and secure mechanism. Such an option will require re-engineering and redesigning current assets to allow for an exposed communications port with the appropriate safety and cybersecurity protocols to mitigate associated and potential significant risks. This will result in increased costs for the MSP due to hardware and administrative resourcing. **Remote communications access of real-time data, i.e. Wi-Fi**: This could deliver real-time access data to consumers and enable access to other participants but is limited by its dependency on the consumer maintaining the Wi-Fi password. If the consumer disables their Wi-Fi, access would be lost. No additional changes would be required for this option other than the above-mentioned requirements.

b)	**Are there alternative data sharing arrangements that should be enabled by a rule change, if made?**	PLUS ES supports that specific data sharing arrangements should not be defined in the Rules. As previously stated, defining outcomes and standards, would be a more efficient, less restrictive enabler, as technology continues to advance, and the electricity landscape evolves. For example, alternative options to manage and monitor CER assets, could include a cable to the meter and a CT clamp. This would also provide direct access to the consumer and would require a consumer-facing energy data platform to interpret the data in a consumer meaningful format. These local access options, however, limit the recipients who can directly access this data.
	8. Who should bear the costs of accessing real-time data?	
a)	**Should all consumers bear the cost of accessing real-time data?**	This is a delicate balancing act between identifying the beneficiaries of these real-time services and considerations around equity, market efficiency and the value of the information. Ultimately, informed end consumers will gain advantages from the provision of these services. These benefits may include direct and transparent cost savings for individuals, the commercialisation of products and services derived from real-time data, and/or a broader, intangible advantage of a sustainable and reliable energy supply that indirectly supports everyone. However, not all consumers will utilise real-time data or benefit from it equally. An equitable approach would involve having those who directly use and benefit from real-time data services bear the costs of delivering these services, and/or implementing a tiered system where customers can select their access level and pay accordingly. This would alleviate the undue burden on vulnerable consumers or those who would only use these services minimally whilst incentivising technology advancement and evolving services. There is an argument that consumers are already paying for their data. Meter annuities paid by customers support the MSP's *current* NER and market obligations. These current metering obligations are applicable to all smart metering installations and are appropriate for those consumers. Changes to the MSP's obligations to implement and maintain the delivery of real-time consumer data will incur future costs for which the MSP should be appropriately compensated.
b)	**What would be the benefits of a dispute resolution framework and how should it operate?**	Some key benefits for a dispute resolution framework are: • Streamlined processes delivering cost effective, efficient and consistent outcomes, supporting execution/enforcement of agreements; • Improved relationships achieved by open communication and negotiation between parties fostering better relationships; and • Confidentiality protecting the reputation of all parties involved. The dispute resolution framework should not be dealing with topics such parties entitled to access data. This item should be clarified in the rules.

	9. What changes would be required to ensure interoperability?	
a)	**Would changes to the minimum services specification requirements be the most effective way to ensure interoperability of real-time data?**	PLUS ES supports an open standard that enables consumer choice for accessing their data seamlessly and efficiently. We do not agree that changes to the MSS requirements are necessitated to deliver efficient interoperability of real-time data. However, the following items will need to be considered and defined outside the MSS[9], to maximise interoperability amongst various systems and platforms and improve customer experience: • Data streams to be transferred; • Common Protocol; • Format; • Data language; and • Common transport mechanism (such as 2.4GHz Wi-Fi) should be ideally agreed. Additionally, any determinations which may require changes to the metering asset will require appropriate lead times and grandfathering of existing metering assets. These lead times would be proportional to the changes required. i.e. re-engineering of the asset to accommodate new components/capabilities would require a lead time greater than three years.
b)	**Would any other changes be required to facilitate interoperability, for example, changes through device standards?**	Achieving optimal interoperability requires expanding the scope beyond changes to the MSS. Considerations need to be given to strong stakeholder collaboration, an evaluation of current infrastructure, future technological advancements and clear guidelines for privacy and security.
	10. Do existing arrangements sufficiently protect consumer privacy and maintain cyber security for any real-time data framework?	
a)	**Would any additional consumer privacy and cyber security protections be required if a real-**	The current Rules assume provisioning of data is achieved via the Retailer and/or the DNSP, where the consumer can be validated. Irrespective of the mechanism used, the real-time data framework needs to: • Deliver a robust and secure access irrespective of the mechanism deployed; and • Protect the privacy and security of the consumer including their awareness that a third party is accessing their real-time data (especially where consumers are moving into a premise). Data encryption and a password that are not dependent on consumers will not suffice.

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[9] A requirement in the minimum services specification would mandate the meter to deliver. As supported within our submission, there may be multiple pathways to achieve the same outcome.

	time data framework were implemented?	Additionally, the MSP does not have a relationship with the customer and will not be able to validate directly the entitlement of the consumer to the data, including the right of the representative. Enabling appropriate cyber security controls across multiple pathways will come at a cost given the additional cyber-attack vectors that multi-pathway, interoperable standards present.
b)	Do you consider other work programs could provide any additional protection required, such as the Roadmap for CER Cyber Security?	Guidelines and protocols for addressing vulnerabilities in other work programs, that involve accessing and transferring sensitive data, will enhance cyber security resilience and strengthen overall industry security protections.

11. What other changes would be required to enable a real-time data framework?		
Would any other changes be required, for example to clarify data and storage arrangements or to implement relevant best practice features from other frameworks?		Except for the considerations/qualifications already outlined in our submission, PLUS ES does not consider other changes are required to clarify data and storage arrangements or to implement relevant best practice features from other frameworks, with the following qualifications: • Parties can execute an agreement suited to the use cases of the real-time data services agreed to; • There is an underlying 24-hour market data already protected which can backfill any missing data; • The data storage of the meter is a finite source, and any additional storage requirements impacts the current obligations for actual data; and • Similarly, continuous re-writing/re-using the same space may have unintentional consequences to the physical metering components such as the RAM.

12. Do you agree with the proposed assessment criteria?		
Are there additional criteria we should consider, or criteria included here that are not relevant?		No Comment