AEMC

REVIEW OF THE REGULATORY FRAMEWORK FOR METERING SERVICES

STAKEHOLDER FEEDBACK TEMPLATE

The template below has been developed to enable stakeholders to provide their feedback on the questions posed in the consultation paper and any other issues that they would like to provide feedback on. The AEMC encourages stakeholders to use this template to assist it to consider the views expressed by stakeholders on each issue. Stakeholders should not feel obliged to answer each question, but rather address those issues of particular interest or concern. Further context for the questions can be found in the consultation paper.

SUBMITTER DETAILS

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PROJECT DETAILS

NAME OF RULE CHANGE:	**Review of the regulatory framework for metering services**
PROJECT CODE:	**EMO0040**
PROPONENT:	**AEMC**
SUBMISSION DUE DATE:	**11 February 2021**

CHAPTER 1 – INTRODUCTION

1. Consideration of other market reforms and related work	
1.1 Are there other significant market reforms that are likely to impact the metering framework that the Commission has not identified?	With regard to Embedded Networks, EMO0036 plays an important role in ensuring accurate, reliable and maintainable smart metering installations are installed. VRT already implements Embedded Networks under the guidelines outlined in EMO0036. VRT can see no technical reason why EMO0036 cannot be fully implemented. Additionally, VRT sees no negative financial impact when deploying metering installations adhering to EMO0036. The enactment of EMO0036 would need to include the provision of resources to enforce the new rules. The benefits of implementing EMO0036 are many, including: • Reducing or eliminating cowboy operations in Embedded Networks; • Providing the trigger point to get smart metering to customers in Embedded Networks; and • Ensuring PoC to Embedded Network customers.
21.2. Is there additional related work that the Commission should consider in this metering review?	VRT recommends adopting the CMIG (Competitive Metering Industry Group) guidelines on metering installations. Presently only the whole current, new build, guideline has been completed. The work of CMIG should be continued and guidelines established for all meter types. Additional guidelines or appendices should be added to cover the different approach required for retrofitting metering installations and the complications that can arise. VRT can see additional value in providing smart metering data to distributors and generators to better plan for maintenance, infrastructure demands, etc. To enable this, VRT proposes that a change be made to the minimum services specification table S7.5.1.1(c) & (d) to include: • the *voltage* as measured by the *metering installation*, with a date and *time stamp* for that reading; • the current as measured by the *metering installation*, with a date and *time stamp* for that reading; • the power (watts) as measured by the *metering installation*, with a date and *time stamp* for that reading; • the supply frequency (Hertz) as measured by the *metering installation*, with a date and *time stamp* for that reading. By adding these data fields to the standard data set returned by smart meters, valuable network performance data can be easily made available to any number of interested parties. This change will remove existing roadblocks to data and will allow for the efficient dissemination of important metering data to a number of key market

	participants.
2. **Assessment framework** – Do you agree with the Commission's proposed Assessment Framework for this review? Are there any additional criteria we should consider as a part of this framework?	VRT agrees with the proposed Assessment Framework. The are no additional criteria that VRT would like to be considered.

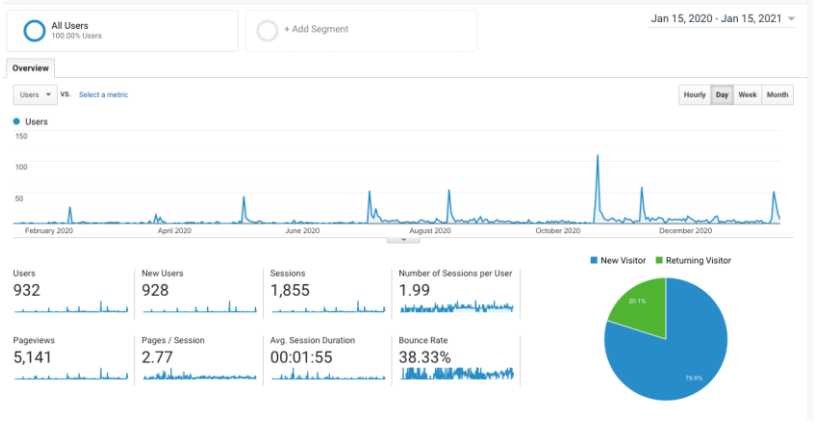
CHAPTER 3 – THE CURRENT STATE OF METERING

3. Expectations of meter rollout	Although the numbers are steadily increasing, whether the rate of the roll out meets expectations and current requirements is a key question for this review.
3.1 How does the roll out of smart meters to date compare with your expectations?	VRT, and the retailers we work with, have made the decision to only roll out smart metering installations across our Embedded Network portfolio. There have been no customer-based road blocks to the roll out of smart metering. However, as the majority of VRT's work involves the upgrading of metering networks, VRT sees many challenges in providing accurate, reliable and maintainable smart metering installations in these brownfield sites. Some of these challenges include: • Upgrading non-compliant metering installations: ▪ Replacing non-compliant meters, CT's, wiring; ▪ Space constraints often related to the non-compliant practice of using 3 phase meters to monitor 3x single phase apartments; ▪ Space constraints related to the physical building layout; ▪ Minimising power interruptions when replacing/rectifying non-compliant metering installations; ▪ Cost constraints, both in upgrading metering installations to meet standards (AS3000 and metering standards), and competing against parties that continue to install non-compliant metering installations without fear of reprisal. • Meeting unattainable standards in brownfield installations. For example, many embedded networks will have multiple body corporate/owners requiring many metering points to accurately apportion metering costs. Applying all jurisdictional requirements could create an unattainable standard for the installation based on space constraints, cost, etc. It is VRT's opinion that the Metering Provider should be empowered to make considered exemptions to ensure the best possible solution for the end consumer. It is not in the best interests of the end consumer to force significantly higher installation costs, just to ensure compliance to a

	jurisdictional guideline that does not improve accuracy, reliability or maintainability. Whilst methods are in place to request exemptions, this process is time consuming and costly and not in the best interests of the end consumer. • Being cost competitive when other parties are willing to provide non-compliant metering installations due to a lack of regulatory oversight and enforcement.
3.2 Is the current pace of smart meter deployment appropriate? What should be the appropriate pace of rollout?	VRT is a small company with modest metering installation quotas (circa 5,000 metering installations per year). If VRT can cost effectively deploy smart meters in every instance, we can see no reason why there would be any limitations on other parties. The penetration of smart meters into the marketplace has been slower than we initially expected. We believe this is due to the fact that the retailers are not embarking on large scale meter replacement programs, allowing older accumulation meters to stay in the environment well past their usable life. VRT has also seen a large number of events within embedded networks where unscrupulous parties are convincing body corporates that there is significant grey areas within the regulations. Expanding on this, these parties then convince the body corporate to install non-compliant metering by offering a perceived saving. Additionally, we believe consumers are not aware enough of the benefits of smart meters, and are therefore not pushing retailers to upgrade their meters.
3.3 What benefits are smart meters providing consumers? Have the benefits changes or improved over time?	Where requested, VRT provides 5-minute data in real time to customers through our TenantView application. This provides for real-time metering data to consumer allowing them to review and modify their usage patterns. With access to real-time consumption data, VRT's customers can modify and test energy consumption behaviours and understand, in real-time, what impact these behaviours will have on their energy bills. We are not seeing the take up of the traditional benefits of smart meters by consumers – time of usage billing, etc. Rather, we are seeing consumers benefit from DER management solutions encompassing smart meters, allowing them to automatically shape supply (solar, batteries) and demand (hot water, air conditioning, etc). These solutions allow them to maximise their investment in rooftop solar, minimse usage during peak times and generally work towards lowering their energy bills.
3.4 have the prices for smart meters plus the costs of associated products and services changed from the introduction of	VRT is investing heavily in new products to enhance the delivery of smart metering installations across embedded networks and on market solutions. This includes new telemetry devices, smart energy meters and advanced DER solutions.

Competition in metering? If so, how?	VRT has not seen any material change in pricing for hardware or infrastructure for legacy smart metering installations. Though it should be noted that VRT was not involved in metering in the NEM before the introduction of Competition in Metering.
4. Are incentives in the right place?	
4.1 As well as understanding more about stakeholder expectations around the roll out of smart meters, and whether those expectations have been met, the Commission is additionally interested in stakeholder views on whether incentives are in the right place.	VRT believe that the market incentives in place to push the rollout of smart meters have not been successful. Relying on consumers to drive the rollout of smart meters in return for lower electricity bills has not worked. As the NEM moves to a higher percentage of fixed costs vs. variable costs due to the increase of renewables in the electricity generation mix, there is limited ability for consumers to drive cost savings though time of use billing. Additionally, a disincentive is created for the retailers, as their revenues will decrease as the rollout of smart meters increases. Smart metering has been successful for consumers in Embedded Networks, allowing PoC and providing increased visibility of electricity usage patterns.
4.2 Are the incentives in relation to smart meter rollout correct? Please provide details on why/why not.	VRT is not aware of any formal incentives in place. Time of use billing has not been taken up widely by consumers. VRT believes that generators and distributors potentially have the most to gain from the roll out of smart meters, as it allows them access the detailed demand information from consumers, allowing them to better control supply to meet demands. As discussed in 1.2, adding voltage, current, power and frequency to the standard data set returned by smart meters, can allow for the provision of critical network performance data to market participants.
4.3 Is the current market structure financially viable? If not, for whom is it not financially viable?	VRT is a small company with modest metering installation quotas (circa 5,000 metering installations per year). If VRT can cost effectively deploy smart meters, providing real time data, over and above the minimum services specification in every instance, we can see no reason why there would be any limitations on other parties with larger buying powers, greater market share, etc
5. Drivers of smart meter roll out	
5.1 What were your expectations regarding the drivers of smart meter rollouts?	VRT was not involved with metering installations before the Competition in Metering rule commenced.
5.2 Has there been any changes in the overall reasons for installing smart meters since the *Competition in metering* rule commenced?	VRT was not involved with metering installations before the Competition in Metering rule commenced.

5.3 Which parties should be responsible for driving the roll out of smart meters?	It is VRT's opinion that retailers should be driving the roll out of smart meters to ensure their metering networks are accurate, reliable and maintainable. Replacing dumb meters with smart meters allows for greater knowledge of metering performance, the ability to identify metering issues quickly and enhances the maintainability of the metering infrastructure. To enable the wholesale roll out of smart meters, especially with Embedded Networks in brownfield sites, the Metering Provider requires greater powers and flexibility in determining the appropriate exemptions required in these complex installations. Without this, there will be an unfairly disadvantaged group of the market where the installation of smart metering (meeting all jurisdictional requirements) is far too expensive to be viable. This in turn creates an environment where parties will continue to offer non-compliant metering solutions, perpetuating the problem. Distributors should be driving the smart metering roll out with a view to have network performance data being made available. More data allows for better decision making processes. VRT feels the key point to provide data to distributors would be adopting VRT's recommended changes to the minimum services specification to streamline the process of making this data available.
5.4 Do consumers have clear information on the benefits of smart meters and their rights relating to requesting a smart meter?	No, VRT does not believe they do. This is particularly evident in Embedded Networks where Body Corporates are acting on behalf of, and in the best interests of, the apartment owners. As there is no clear indication of when, if ever, EMO0036 will be rolled out, many unscrupulous parties are convincing Body Corporates to replace their metering installations with non-compliant metering. By playing on the unknown, and glossing over the existing regulations which are poorly enforced, many Body Corporates are being deceived into installing non-compliant metering installations. VRT strongly believes that in EMO0036 were enacted, there would be an end to this practice.
6. **Customer experience** – what are your views on the customer experience in relation to smart meter rollout and installation?	There is a small minority of consumers that can benefit greatly and would be interested in the data available from a correctly deployed smart metering installation. The vast majority of customers will not take the time to review energy usage in a meaningful way, nor will they be incentivised to make changes to reduce their energy consumption. When monitoring the usage patterns of customers given real-time access to their energy consumption (electricity, thermal energy, cold water, hot water and recycled water), only 20% will view the data more than once. This suggests that customers may not be the biggest driver for smart meter roll out. However, smart meters can be a driver for other systems, such as DER. Smart DER systems may need data from smart meters to make informed decisions. A simple

	example would be EV systems including the vehicle and charger, reviewing demands and making decisions as to whether to initiate or curtail charge and discharge. 
7. Industry Cooperation	
7.1 Do you have any suggestions on how industry cooperation can be improved?	A Forum between MC/MDP/MP, retailers and distributers to share challenges and best practice. Access to more 'voice of the consumer' information so participants can see how effective educational campaigns have been
7.2 Are changes to the market structure or roles and responsibilities needed to improve the consumer experience?	N/A
8. Expectations of metering services	
8.1 What expectations did you have around the services that smart meters would provide?	N/A
8.2 What services are being provided by smart meters currently? Are these services widely available?	VRT's implementation of smart metering provides data in real-time, rather than batched. This means both customer and operations staff have access to metering data in real-time. The implications of this include: • The ability for operations staff to review and resolve customer enquires immediately; • Monitor, in real-time, any abnormal usage patterns; and • Assist in trouble shooting connection issues and power quality concerns within a building. This data can also be used to drive real-time control of DER, allowing consumers to maximise the benefits of their rooftop solar and battery installations.
8.3 What services dd you expect from smart meters which have not eventuated?	N/A

8.4 Are there any services being provided by smart meters which were not anticipated at the time of the *Competition in metering* rule change?	Smart meters could be used as local sources of real-time data for DER Control and community based smart grids. Thoughts around data security and data access rights may need to be given. Additionally, many smart meters use proprietary protocols which make integration with DER or smart grid devices, difficult and/or expensive, especially at a per home level.

CHAPTER 4 – THE FUTURE STATE OF METERING

9. Collection and use of metering data	
9.1 In relation to metering data, what data should be captured by smart meters, and why?	Considerations should be made with regard to balancing the data requirements to the frequency of data. Both have impacts on data services charges. On one hand, most smart meters are capable of capturing hundreds, if not thousands, of data points. Access to this data may be highly beneficial in limited circumstances. On the other hand, retrieving data in real-time, rather than batched, can have a great impact in the presentation of metering data, both to the end consumer (immediate response to actions) or to other market participants (real-time notification of events and the ability to investigate). Decisions relating to the collection of additional metering data should be weighed against the additional data costs, whilst also considering non-standard methods of collecting data. Requiring additional metering data through changes in regulations could have an unexpected negative impact on providers offering innovative solutions such as real-time data, etc.
9.2 In relation to metering data, who should be able to access metering data, and how? What protections should be in place?	It is difficult to predict how data will be used in the future. By anonymising data streams and providing additional metadata such as linking data to regions, footprint, degree day, etc, data could be made available to the greater public without compromising data security. Providing real time data to generators and distributors would allow them to more finely control their infrastructure to meet demands.
9.3 What impact do you think the Consumer Data Rights may have on the access to, and use of, metering data?	We believe the proposed AEMO gateway model for implementing CDR in the electricity sector will provide the right balance between data access and costs. Implementing CDR will increase the access to and use of metering data. Depending on the uptake from market participants, there may be increased demand for more data to be shared via the gateway, which could put pressure on metering costs, particularly data charges.
10. Future metering services	
10.1 What is your understanding of the other services that smart meters can provide?	There are a number of additional services that smart meters can provide, including:

	• Data to control DER (Solar, batteries, etc) • Additional data points over the current minimum standards • Near real time usage data (5 minute intervals) to end users
10.2 What future services do you expect or want metering to facilitate?	N/A
10.3 If additional services are to be provided by smart meters, how should the costs of providing these services be allocated?	The costs should be borne in proportion to the stakeholder receiving the most value from the additional services. For example, if distributers and generators get additional benefit by having the addition data provided as per our suggestion in 1.2, they should pay for the benefit they are receiving.
11. Penetration of smart meters required	
11.1 Are particular metering services only cost effective when a particular penetration is achieved? If so, what services and what penetration is required?	Generally speaking, VRT only supplies metering services to multi-unit residential complexes with greater than 50 units. That being said, the benefits that smar meters can bring by providing data to manage community-based microgrids means that even low-density residential sites can achieve cost benefits from installing smart meters.
11.2 What other factors are important in determining whether the provision of particular services are efficient or effective (e.g. geographic spread).	Flexibility of network design is a prime factor for cost effectively deploying smart metering installations. Incentives for providing services above the minimum requirements. For example, there may be a case for data in real-time. This incurs additional data services costs, and/or variations in network architecture. But where there is a benefit for a party to have this information in real-time, an incentive may be suitable for this service to be provided.

CHAPTER 5 – ARE CHANGES REQUIRED TO THE REGULATORY FRAMEWORK?

12. Encouraging the adoption of smart meters and future services	
12.1 Is the current regulatory framework appropriate for the current needs of metering and the market? Is it flexible enough to provide encouragement for the development of future services in metering?	It is very difficult to determine what technology the future might bring. Therefore, regulations should be based on the intended outcome and not be prescribing the solution. An example of this would be regulating the data transmission network. You would describe the intended outcomes such as frequency of data, security, etc, rather than prescribing a specific (or generic) architecture type. Another example would be in specifying metering size/spacing requirements. As technology evolves, electronics typically miniaturise. By mandating specific sizes to cater for legacy solutions, regulations are creating wasted space, wasted resources and complicating future metering installations.

12.2 To encourage the higher adoption of smart meters: (a) What changes, if any, need to be made to the current regulatory framework for metering services? (b) What changes, if any, need to be made to other instruments? (e.g. regulatory instruments, guidelines, codes)	(a) Increased enforcement measures to identify and incetivise consumers to fix non-compliant metering installations (b) Within Embedded Networks, EMO0036 should be adopted to encourage the change-over from non-compliant metering (endemic to Embedded Networks) to smart metering solutions. Greater powers for Metering Providers to exempt specific jurisdictional requirements that may adversely effect end consumers (through greater rectification costs) that would otherwise prohibit the installation of compliant smart metering solutions.
12.3 Are there any other avenues of encouragement that are available that the Commission has not considered in this paper?	Perhaps an incentive, for parties that find (through no fault of their own) that they have non-compliant metering installations, to upgrade to smart metering solutions. This could be in the form of a monetary credit or an amnesty from penalties (assuming non-compliant metering installations start to be reviewed and actions enforced).
13. Barriers to realising the benefits of smart meters	
13.1 Are there other barriers that were not identified by the Commission that you have found to prevent the realisation of benefits of smart meters and/or slowed the rollout of smart meters in the NEM?	N/A
13.2 What changes, if any, need to be made to the current regulatory framework for current arrangements to improve deployment?	VRT believes the following changes would be beneficial to the market in general: • Implementation of EMO0036 • Increased enforcement of requirements • Flexibility with Metering installations • Additoinal data provided to Distrbuters/generators to allow them to drive smart meter adoption
13.3 Are there other tools outside of the regulatory framework that may address some of the current barriers to realising the benefits of smart meters and/or the slower rollout of smart meters in the NEM?	Improving market awareness of what the actual requirements are, what benefits there may be and who to talk to should they have concerns.

OTHER COMMENTS

14. Information on additional issues	N/A

REGISTRATION OF INTEREST FOR REFERENCE GROUP

If you are interested in nominating for the Review of the regulatory framework for metering services Reference Group you can email registations@aemc.gov.au or provide details of the person you would like to nominate below:

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