

Ref: 20251023JF:HP

23 October 2025

Anna Collyer
Chair
Australian Energy Market Commission
GPO Box 2603
SYDNEY NSW 2000

Dear Ms Collyer,

ERC0399 – Real-time data for consumers – Submission in response to draft determination

Essential Energy welcomes the opportunity to respond to the Australian Energy Market Commission (AEMC) on its draft determination proposing a rule change to provide real-time data for consumers. Essential Energy manages over 183,000 km of powerlines, covering 95 per cent of NSW and serving approximately 900,000 customers in regional, rural and remote communities.

Essential Energy has actively engaged in the AEMC's review of the metering framework, which led to this rule change proposal, and this submission follows our responses to the consultation paper in November 2024 and directions paper in February 2025. As highlighted in our previous submissions, Essential Energy strongly supports the objective of providing real-time data for consumers, enabled by an accelerated deployment of smart meters.

The draft determination addresses several key issues with the approach proposed by the AEMC in the directions paper. Essential Energy welcomes the AEMC's decision not to proceed with a 15-year timeframe for implementation of smart meters with real-time data capabilities, which would have shifted technology risk to consumers. We also welcome the shift away from levying a charge on *all* users for real-time data.

However, Essential Energy is concerned that the proposed approach in the draft determination introduces inequity for consumers who – through a decision outside of their control – have had, or will have, smart meters installed at their properties prior to 1 January 2028. For consumers who want access to real-time data but must pay for access, the proposed approach to ensuring price transparency and competition is likely to be inadequate. Additionally, we remain concerned that the proposed reliance on consumers' Wi-Fi connectivity may introduce a critical point of technology failure, which has the potential to substantially undermine the potential benefits of real-time data capability and is likely to have a disproportionate impact on consumers in the regional and remote areas Essential Energy serves.

The proposed timeline for implementation addresses some issues but introduces others

The AEMC's proposed approach of implementing real-time data via an update to the minimum specifications for smart meters appears to be a sensible, pragmatic approach that will result in lower overall costs to consumers and a faster rollout than previously proposed in the directions paper. For

consumers whose smart meters are replaced after 1 January 2028, this could bring tangible and substantial benefits, particularly as consumer energy resources (CER) technologies and third-party applications evolve to leverage the capabilities of real-time data.

However, 2028 is a long time to wait for consumers, especially when smart meters with real-time data capabilities are available today and could be installed sooner. Significant growth in the installation of home energy storage systems since the introduction of the Federal Government's Cheaper Home Batteries Program will fast track the need for better data access and create a market for new home energy management (HEM) technologies. The delay in the commencement of the new minimum specifications means there will be potentially hundreds of thousands of consumers receiving new smart meters that are ultimately not-fit-for-purpose. Across Essential Energy's network, our Legacy Meter Replacement Program (LMRP) plans to replace approximately 250,000 legacy meters, representing 37.5 percent of the legacy fleet, by 30 November 2027, in addition to meters installed for new connections or retailer-led meter exchanges. This exposes these customers to devices that may soon fall short of required capabilities.

The proposed remedy for this issue – that these consumers bear the cost of upgrading to a smart meter that meets the minimum specifications – is neither efficient nor equitable. Even consumers who value real-time data may see the replacement of an otherwise functional smart meter as wasteful, and defer this cost until a later time. We note the AEMC's comment that:

As shown by scenarios 1 and 3, Oakley Greenwood's analysis found that making access available, at no charge, in the near term could result in premature replacement of otherwise functional smart meters, imposing additional installation costs on consumers.¹

However, under the AEMC's proposed approach, the costs of premature replacement are not avoided but simply shifted to some consumers. This approach risks exacerbating inequity, where real-time data will only be available initially to those consumers whose smart meters are replaced after 1 January 2028 and those with the capacity and willingness to pay. This arbitrary division of consumers is not equitable, and risks undermining social licence for the adoption of real-time data capable smart meters. We note the AEMC's comments during the public forum on 2 October that consumers may request for their retailers to delay rollout of their smart meter until after the minimum specifications come into effect. However, there is no mechanism in the proposed approach to the smart meter rollout to enforce or incentivise retailers to oblige these requests. In fact, retailers or metering service providers (MSPs) may have an incentive not to meet these requests as they seek to deploy their remaining stock of lower cost, less capable smart meters before 2028. Further, as LMRPs are being approved by the AER following engagement between retailers, MSPs and Distribution Network Service Providers (DNSPs) now, adjusting these programs, particularly in geographically large network areas, will be less than likely.

This issue is compounded by the nature of the potential benefits of real-time data, which are only likely to become apparent to many consumers as CER technologies evolve. Even for consumers with the capacity to pay, many may lack the imperative to pay upfront for undefined value over time. The consequence is that many consumers who could leverage the benefits of real-time data – including benefits that will be shared with other consumers (e.g. network benefits flowing from more efficient use of CER) – will not have access to real-time data and these benefits will not materialise.

¹ AEMC 2025, Real-time data for consumers draft determination, p. 62.

Essential Energy recommends the AEMC consider how to embed a right for consumers to defer a smart meter installation scheduled before 1 January 2028, where deferral is reasonably practicable. This right would reduce the number of pre-2028 installations that lack real-time data capability, improve equity, and avoid wasteful premature replacement of otherwise functional meters. The AEMC should also explore whether the introduction of flexible exports presents opportunities for efficiency in meeting the real-time data needs of consumers and third parties, and whether some of the cost and equity impacts on some consumers could be alleviated if these processes were better aligned. For instance, in NSW from early 2026, all newly installed or upgraded solar systems will need to allow for flexible exports under new Licence conditions for DNSPs.

Essential Energy encourages the AEMC to reconsider its approach to implementing these reforms to deliver more real-time data capable smart meters to more consumers sooner, and to ensure that the benefits of real-time data are shared more equitably.

Competition, transparency and timeliness for consumers wishing to pay could be enhanced

If the AEMC proceeds with the reforms as proposed, the protections for consumers who choose to pay for a real-time data enabled smart meter should be strengthened. The proposed approach simply obliges retailers to offer this service at a price that reflects a ‘reasonable cost’ to facilitate this request. However, what constitutes a reasonable cost may differ greatly, depending on a range of factors that are neither visible nor controllable for consumers. Some consumers may contact other retailers to see if they can find a lower price for this service, but would need to change retailers and move to a new retail plan for access. As Essential Energy raised in our response to the directions paper, this one-off impost must be balanced against the other ongoing costs of service provision by retailers, and we have concerns that this may not result in best outcomes for consumers.² On the contrary, the proposed approach seriously impedes consumer choice and price transparency – two essential features of a competitive market. For consumers with one or few retailers in their area – a reality across large parts of regional and remote Australia – they may have to either pay the price they are quoted by their retailer or forego access to real-time data altogether.

There is a further risk for consumers in regional and remote areas that the timeliness of the installation of a real-time data enabled smart meter. Currently, the tyranny of distance in the Essential Energy network is resulting in consumers requesting a smart meter from their retailer having to wait years for a meter to be installed. Essential Energy is concerned that unless there are installation performance standards or consumer protections as to service level expectations, consumers willing to pay for a meter in advance of the 2028 time period may suffer delays in receiving the services they have paid for upfront.

To protect consumers and ensure equitable outcomes, the AEMC should ensure consumers have visibility of ‘reasonable costs’ across retailers and locations as well as expectations for installation timing. It is unclear why the AEMC has decided to remove the requirement for the Australian Energy Regulator (AER) to report charges, as proposed in the directions paper. This approach may not have been optimal – which we highlighted in our submission to the directions paper³ – but should be included as a minimum standard needed on cost transparency. The AEMC should also consider installing a price

² Essential Energy 2025, Submission in response to Real-time data directions paper, p. 5.

³ Essential Energy 2025, Submission in response to Real-time data directions paper, p. 5.

ceiling or 'maximum reasonable cost' to protect consumers in regional and remote areas with little or no retail competition.

The focus of the rule is on 'facilitating connection' but maintaining that connection is equally important

Connectivity reliant on consumers' Wi-Fi is likely to be considerably less reliable than existing in-meter connectivity technology, particularly in areas with low or no wireless telecommunications coverage. Even for residential properties, meters are often located too far from Wi-Fi routers to be reliable. This is particularly the case in the Essential Energy network, where rural metering installations are often located on poles some distance from residences. Where this wireless connection is broken, either through environmental factors, password change, software update or change in hardware along the connectivity chain, the consumer may lack the knowledge, awareness or motivation to re-establish connection. To avoid a single point of failure, the AEMC could also consider amending the final rule to establish a simple connectivity hierarchy. Where feasible, in-meter wired, or cellular options should be used in preference to Wi-Fi.

Under the proposed amendments to the retail rule, retailers and MSPs are obliged only to facilitate connection to real-time data. This connection may only be momentary. There is no incentive for retailers or MSPs to assist the consumer to re-establish connection or seek consumer consent to address the issue, either remotely or through physical access to the property. Any costs of rectification or installation of additional hardware to ensure a reliable connection will need to be met by consumers. These issues are likely to be most acute in regional and remote areas, where property sizes are typically larger and multiple buildings often operate under a single NMI and meter, or there may be multiple meters per property and site accessibility challenges.

In the Cost Benefit Analysis (CBA), Oakley Greenwood acknowledges that:

The take-up of RTD is likely to be greatest where access is provided from a hard-wired data port in the meter, using a common data transfer protocol as this will maximise the number of CER OEMs that are likely to use RTD from the SM instead of installing additional site monitoring equipment.⁴

However, the AEMC's proposed approach appears to assume and rely on consumers' reliable Wi-Fi connectivity. There is a risk that the benefits that flow to consumers via their DNSPs having visibility of low- and high-voltage networks, including in relation to the identification of outages, will be undermined by patchy data if smart meters rely on Wi-Fi connectivity. Given the need for DNSPs to pay for access to real-time data, the value of this data will be diminished with every meter not connected, and DNSPs may simply revert to existing power quality data (PQD) by default. This means consumers will miss out on the benefits that DNSPs could provide with reliable real-time data.

The AEMC should consider amending the proposed approach to ensure retailers and/or MSPs hold ongoing accountability for reliable supply of real-time data, beyond simple facilitation of the initial connection.

⁴ Oakley Greenwood 2025, Costs and benefits of real-time data from smart meters, p. 3.

The final reform design should focus on unlocking tangible benefits for consumers

Essential Energy welcomes the completion of a CBA but has concerns that the CBA assumed the same standard of real-time data across all scenarios. It did not assess the net benefits of real-time data “recorded every second and delivered within a second” against lower resolution data, such as the “received within no more than five minutes” definition proposed by Energy Consumers Australia and supported by Essential Energy.⁵

Under the proposed changes, the Oakley Greenwood report acknowledges most of the benefits would only be realised by customers with sufficient engagement and resources to invest in and utilise third party CER applications and connected smart appliances in their homes. The AEMC has not provided evidence to forecast the proportion of customers who will be willing and able to access the potential benefits of real-time data versus that delivered in less than five-minute intervals. It is also not clear whether some or all of these benefits could be realised through third-party CER applications in their own right, which currently provide sufficient access to data and control over CER assets for many customers without RTD capabilities in their smart meters, or how the introduction of flexible exports will impact the modelled costs and benefits.

On the other hand, the benefits of DNSPs having access to RTD could be unlocked for all consumers, irrespective of their level of engagement or resources, in the form of greater network visibility and feedback, which DNSPs can use to provide services to consumers more efficiently. However, the draft rule does not propose to make RTD directly available to DNSPs on behalf of consumers, a policy design that “therefore does not constitute an incremental benefit” according to the CBA.⁶

The uncertainty about the net benefits to consumers from this reform is exacerbated by the AEMC’s decision not to proceed with any of the five scenarios modelled in the CBA, but with a separate, “alternative” approach. Before the AEMC finalises this reform, it should provide confidence through further analysis or advice that the proposed design (including the definition of real-time data and model for rolling out real-time data capable smart meters) is economically efficient. While further delays in this process are undesirable, the potential implications of flaws in the proposed approach could be substantial and long-lasting for consumers.

Conclusion

In Attachment A, we provide responses to the consultation questions, reflecting our positions above.

If you have any queries regarding this submission, please do not hesitate to contact me on 0419 818 115 or via email at hilary.priest@essentialenergy.com.au or alternatively, Jon Frazer, Regulatory Strategy Senior Specialist via email at jon.frazer@essentialenergy.com.au.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Hilary Priest".

Hilary Priest
Head of Regulatory Affairs

⁵ Essential Energy 2025, Submission in response to Real-time data directions paper, p. 3.

⁶ Oakley Greenwood 2025, Costs and benefits of real-time data from smart meters, p. 3.

ATTACHMENT A: RESPONSES TO SELECTED CONSULTATION QUESTIONS

Consultation Question	Essential Energy Response
1. Would our draft rule encourage consumers and energy service providers to access real-time data from smart meters? What is the benefit of this?	The draft rule will enable real-time data capability for those consumers whose smart meters are installed after 1 January 2028. It is unclear how many consumers this will include, and is not targeted to consumers who have expressed an interest in accessing the benefits of real-time data, either directly or through third-party service providers. The potential benefits of real-time data for consumers flow from reliable access. For service providers, including DNSPs, reliable access is essential, as is sufficient scale of consistently formatted real-time data across large numbers of consumers. However, the draft rule does not include measures to ensure or incentivise reliable access or adequate scale. The focus on simply facilitating initial connection and the reliance on Wi-Fi connectivity means the benefits of this reform may be undermined by patchy data. In this regard, consideration of a simple connectivity hierarchy could be introduced; one which prefers in-meter wired or cellular options over Wi-Fi. In our view, making some consumers pay for access to real-time data will deter or slow uptake, as even those who wish to access real-time data may see the financial and environmental costs of replacing an otherwise functional smart meter as wasteful. In turn, this will reduce the aggregate benefits for all users of DNSPs and other service providers of having access to real-time data at scale.
2. Should the min specs be changed to require all new meters installed from 2028 to be able to communicate real-time data both wirelessly and through a wired connection? Would changing the min specs increase benefits whilst imposing low costs on all consumers?	2028 is a long time to wait for consumers, especially when smart meters with real-time data capabilities are available today and could be installed sooner. Updating the minimum specifications of smart meters appears to be a cost-effective solution, but only for those consumers who receive a smart meter after 1 January 2028. This results in an outcome that will feel unfair to other consumers, may be inequitable, and is likely to undermine social licence for the broader rollout of real-time data capable smart meters. As discussed in the response to question 1, the AEMC may want to consider a connectivity hierarchy which prefers in-meter wired or cellular options.
3. Do you agree with the costs the CBA estimates would be incurred to implement our draft rule? Would these costs decrease over time?	The AEMC has chosen to proceed with a model of delivery that was not modelled in the CBA, so it is impossible to accurately assess the relative costs and benefits of this approach. It is also worth noting that many of the costs of the transition to real-time data capable smart meters are simply excluded from the modelling because these will be met by consumers directly. These costs are real and should be included in the modelling.

Consultation Question

Essential Energy Response

	Also, the CBA assumed the same standard of real-time data across all scenarios. It did not assess the net benefits of real-time data “recorded every second and delivered within a second” against lower resolution data, such as the “received within no more than five minutes” definition proposed by Energy Consumers Australia and supported by Essential Energy. Before the AEMC finalises this reform, it should provide confidence through further analysis or advice that the proposed design (including the definition of real-time data and model for rolling out real-time data capable smart meters) is economically efficient. While further delays in this process are undesirable, the potential implications of flaws in the proposed approach could be substantial and long-lasting for consumers.
4. Our draft approach is to progressively enable consumers with new meters installed from 2028 to access real-time data at no charge. What is the benefit of enabling more consumers to access real-time data from smart meters, at no charge, sooner?	The draft approach is unclear in providing consumer benefit, particularly for those who would like real-time data capability but already have a smart meter or will have one installed before 2028. To access real-time data, these consumers will have to pay for their own meter upgrade, as well as pay for the socialised cost of others’ meter upgrades through their bills. This is not equitable, and will likely result in delayed uptake of real-time data-enabled smart meters as these consumers defer their decision to upgrade. As discussed in the main body of our submission, a codified right for customers to defer meter replacement scheduled prior to 1 January 2028 would materially reduce the pre-2028 cohort of meters that do not meet the minimum specifications from 2028 onwards. Acknowledging the potential for real-time data to enable individual consumer benefits, as well as shared benefits (e.g. through more efficient use of the network), it may be better to socialise the costs of upgrading to real-time data enabled smart meters for any consumers who request it. If there are costs associated with disposal of unused, older generation smart meters already purchased by retailers/MSPs, it may also be more efficient to socialise these costs in the short term than defer the cost of upgrade until a later time and forego the benefits of real-time data in the interim. However, the CBA commissioned by the AEMC does not consider these scenarios, and the draft approach reflects an ‘alternative’ approach selected by the AEMC that did not form part of the scenarios modelled by Oakley Greenwood. Only an updated CBA can properly inform the most efficient delivery model.
5. What information would be useful for consumers to help them determine if accessing real-time data is beneficial and if any	Ideally, consumers should not face this choice. Either the benefits of upgrading smart meters to real-time capability for all consumers outweigh the costs (acknowledging that many of the potential benefits may rely on technologies or applications that have not yet

Consultation Question	Essential Energy Response
charge to them, to upgrade the meter, is reasonable?	been developed), or the rollout is not economically efficient and should not proceed. Essential Energy's position throughout this review has been to strongly support the objective of providing real-time data for all consumers, enabled by an accelerated deployment of smart meters, with no direct cost to consumers for access to this data. If the rollout of real-time data enabled smart meters proceeds, it should be supported by a public education campaign to illustrate to consumers how they can make the most of this data, and the steps required if they wish to provide their consent to third parties to utilise this data on their behalf.
6. Would any other regulatory mechanisms better enable all consumers to access real-time data from smart meters, at low cost to the market?	The draft determination states that the AEMC "expect[s] competition in the market for metering services to keep charges reasonable".⁷ It is unclear what market analysis the AEMC has undertaken to arrive at this expectation. In our submission to the directions paper, Essential Energy stated that "the market for metering data is already highly concentrated, with few firms and high barriers for potential new entrants".⁸ This is exacerbated by a lack of retail competition in many regional and remote areas. The draft approach risks exposing many consumers, particularly those outside of major metropolitan areas to either higher prices, reduced willingness to supply real-time data enabled smart meters, slow installations of meters or all of the above. Consumers would have no capacity to negotiate on price, nor any transparency of what other consumers are paying for the same service. The proposed approach of consumers having to call multiple retailers (if available) for quotes, and then change retailers and plans just to attain cheaper access to real-time data is cumbersome and impractical. The AEMC should review a range of regulatory measures to protect consumers and ensure services are provided efficiently, at least cost and in a timely manner. These measures should include a price ceiling or 'maximum reasonable cost' to protect consumers in regional and remote areas with little or no retail competition, and the application of installation standards. In addition, a deferral right for customers scheduled before 1 January 2028 would be of value.
7. We proposed a definition of real-time data and a requirement	There remains significant uncertainty about how the AEMC's definition of real-time data would flow through to AEMO's real-time

⁷ AEMC 2025, Real-time data for consumers draft determination, p. 16.

⁸ Essential Energy 2025, Submission in response to Real-time data directions paper, p. 5.

Consultation Question	Essential Energy Response
on AEMO's real-time data procedures. Would these provide industry with sufficient clarity on what real-time data is, and how real-time data would be made accessible from smart meters?	data procedures, as shown during AEMO's public forum on 17 October 2025. There is also uncertainty about how these standards and procedures would impact or intersect with data generated and captured through the introduction of flexible exports, and whether there are opportunities to better meet the needs of consumers by aligning these processes.
8. Our draft rule would introduce a range of requirements on different parties to enable customers to access real-time data. Do you consider that our draft rule would support a good customer experience for customers requesting access?	We have answered this question through our other responses and broader submission.
9. Would our draft rule introduce appropriate security measures to protect customer information from being accessed by unauthorised parties?	We note the concerns of stakeholders raised during the public forum with the security risks of reliance on consumers' Wi-Fi connectivity. However, MSPs are best placed to comment on the appropriateness or otherwise of the AEMC's proposed approach from a cyber security perspective.