Australian Energy Market Commission

AEMC
Australian Energy Market Commission

RULE

Draft rule determination

National Electricity Amendment (Real-time data for consumers) Rule 2025

National Energy Retail Amendment (Real-time data for consumers) Rule 2025

Proponent

Energy Consumers Australia

11 September 2025

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About the AEMC

The AEMC reports to the energy ministers. We have two functions. We make and amend the national electricity, gas and energy retail rules and conduct independent reviews for the energy ministers.

Acknowledgement of Country

The AEMC acknowledges and shows respect for the traditional custodians of the many different lands across Australia on which we all live and work. We pay respect to all Elders past and present and the continuing connection of Aboriginal and Torres Strait Islander peoples to Country. The AEMC office is located on the land traditionally owned by the Gadigal people of the Eora nation.

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Citation

To cite this document, please use the following:
AEMC, Real-time data for consumers, Draft rule determination, 11 September 2025

Summary

1 In response to a rule change request from Energy Consumers Australia (ECA), we have made a more preferable draft rule to enable access to real-time data from smart meters. The Commission has made a more preferable draft electricity rule and a more preferable draft retail rule (referred to in this determination as the draft rule).

2 Our draft rule would benefit consumers who can use real-time data to inform their energy choices, including helping manage their consumer energy resources (CER). Real-time data can also be used for other services that would deliver value for consumers now and into the future, such as services that support the integration of CER into the grid and help lower overall system costs.

3 Our draft rule would also improve data availability for other parties that offer services to consumers, subject to the consumer's consent. Better access to more data can enable a more competitive and innovative market for consumer energy services, contributing to better products and services and lower costs for consumers.

4 Our draft rule would commence on 1 January 2028.

5 We are seeking feedback on our draft determination and rule by **23 October 2025.**

Are you broadly supportive of our draft rule?

ECA's rule change request proposed enabling all consumers to access real-time data from smart meters at no charge

6 ECA proposed to enable all consumers and their authorised agents to access real-time data from smart meters. Consumers would receive access at no charge, and the data would be delivered in a form that is meaningful for consumers to engage with.

7 ECA considered that this would increase the value of smart meters by ensuring that the data they produce is accessible and actionable for all consumers.

We supported universal access, but proposed a transition period before access would be enabled at no charge

8 In our directions paper, we outlined our view that all consumers should have access to real-time data as part of their electricity service. We also considered that real-time data should be accessible to all consumers at no charge in the long term.

9 Access at no charge does not mean that consumers would not incur any costs to access real-time data. It means that consumers could access the service without being charged an upfront fee. The costs of providing access would be spread across all consumers and recovered through consumers' bills, consistent with how the costs of metering services are already recovered.

10 We recognised that there may be many ways for access to real-time data to be provided, some more costly than others, but all likely to pose additional costs to consumers.

11 To avoid requiring all consumers to pay high costs of making real-time data accessible when not all consumers might want it, we proposed that enabling access at no charge should be delayed until 2040. This would give retailers and metering coordinators (MCs) sufficient time to consider and implement lower cost methods. For example, this could include embedding real-time data communications functionality into smart meters, which was identified as a low-cost option to enable access to real-time data.

12 To support this outcome, we proposed obligations on MCs and retailers to facilitate access to real-time data and on the AER to publish charges to improve transparency that would facilitate competition in this real-time data service.

Stakeholders supported our direction but wanted access to be available at no charge, sooner.

13 In submissions to the directions paper, stakeholders agreed that MCs and retailers should facilitate access to real-time data. This would support innovation and competition in services that value real-time data. Stakeholders also supported a clear definition of real-time data.

14 Some stakeholders suggested that access to real-time data, at no charge, should be available earlier than 2040. However, stakeholders also noted that the cost of providing access should be minimised.

We tested the costs and benefits of making access available at no charge, sooner

15 We engaged Oakley Greenwood to conduct a cost-benefit analysis (CBA) of different options to deliver universal access to real-time data from smart meters.

16 Some options included a change to the minimum service specification (min spec) of new meters, representing a uniform technological approach to making this data available at low cost.

17 This CBA found that the highest net benefit options were not the lowest cost options. There were options with lower costs that still delivered net benefits. Most benefits would accrue to CER customers, while all customers would incur costs.

We now propose a mixed solution, embedding functionality in meters to support access at no charge for some consumers sooner, and all consumers later

18 Our draft determination is an alternative to the scenarios analysed by the CBA. It aims to increase the likelihood that more customers will access and respond to real-time data, driving overall lower costs to all customers.

19 Our draft determination is to change the min specs of new smart meters installed, from 1 January 2028, to include embedded functionality to communicate real-time data both wirelessly and through a wired connection. This is a low-cost way of providing the option to access real-time data to the greatest number of consumers.

20 Accompanying this, our draft rule would enable a consumer with this meter to access real-time data at no charge. Under this approach, approximately 15 per cent of consumers across New South Wales, the Australian Capital Territory, South Australia and Queensland would have access to real-time data, at no charge, by the conclusion of the accelerated meter rollout in 2030. It is unlikely that many meters in Tasmania would have real-time data communications functionality by 2030 because the rollout of meters would likely be completed before 2028. Our draft rule would not apply to Victoria, though Victorian customers already have access to near-real-time data at no charge.

21 Customers who value access to real-time data and who do not have a smart meter with real-time data functionality could still access real-time data from 2028. However, these customers may choose to pay a charge to retrofit or bring forward the replacement of the meter to access real-

time data.

22 The cost of changing the min specs is approximately 66 cents per customer per year. We would expect these costs would be indiscernible in a consumer's final bill even if a retailer chooses to pass these costs through. We also consider that these costs would reduce over time, and continued competition in the retail and metering services markets would counteract any impact of this draft rule.

23 We acknowledge that not all customers would have access to real-time data at no charge until all meters installed before 2028 have been replaced. If these customers want access to real-time data from smart meters, they may choose to pay their retailer a charge to retrofit or replace the meter to access real-time data from the smart meter, or install other devices to access real-time data, consistent with current practice.

Although some consumers may have to pay to access real-time data, we consider that our draft rule would reduce costs and stimulate benefits.

24 Our proposal in the directions paper targeted imposing the lowest costs on all consumers, but those consumers who wanted access to real-time data, before 2040, would be required to pay a significant charge.

25 We consider that this is likely to reduce the number of consumers who would otherwise choose to access real-time data from smart meters and, therefore, reduce the number of consumers that might change their behaviour in a way that could deliver overall lower costs to consumers.

26 We consider that our draft determination would increase the number of consumers accessing real-time data from smart meters.

27 We have not attempted to quantify how many customers would do so, but we expect, overall, the number of customers who would choose to access and respond to real-time data would be greater under our draft rule than under the proposed approach in the directions paper that had all customers continuing to have to pay a charge until 2040.

28 This is because bringing forward access at no charge for some consumers would increase the number of consumers accessing real-time data from smart meters. This greater rate of access to real-time data from smart meters is expected to deliver a greater benefit to all customers.

29 We consider this draft rule would better promote the national electricity objective (NEO) and the national energy retail objective (NERO) than ECA's proposal because it minimises costs to all customers whilst still delivering benefits to all customers.

30 Consistent with the directions paper, our draft determination includes a definition in the rules and imposes obligations on retailers and MCs. A key change from the directions paper is to not require the AER to publish charges. We expect retailers to have many ways to meet consumer needs for real-time data that will not be comparable, and where customers want this data, they are likely to seek options from multiple service providers. Further, it would be administratively costly to require retailers and the AER to report this information.

Our draft rule would introduce a framework to facilitate access to real-time data from smart meters

31 Under the framework that would be introduced by our draft rule:

- real-time data would be defined in the NER to create a clear and consistent understanding of real-time data

- by July 2026, AEMO would publish real-time data procedures that would further specify relevant standards, protocols and technical requirements. Any specifications in these procedures would:
  - support greater interoperability between third party devices and smart meters
  - create a minimum level of data protection
  - clarify any obligations in respect of real-time data.
- the min spec would be changed to require all new meters installed from 2028 to have embedded wireless and wired real-time data communications functionality. This would introduce a uniform low-cost technology to enable consumers to access real-time data.
- retailers would be required to facilitate access to real-time data by:
  - managing the relationship with customers and customer appointed representatives, and
  - ensuring MCs make real-time data accessible from the smart meter.
- retailers may not charge any customer to facilitate access if a customer has a smart meter installed from 2028 that meets the new minimum specifications introduced by our draft rule.
- retailers would be able to protect customers who may be experiencing family violence and revoke access to parties who do not have their customer's consent to access real-time data.
- MCs would be required to facilitate access to real-time data in accordance with a retailer's request and any requirements specified in AEMO's real-time data procedures. Specifically, MCs would be required to ensure that devices can pull real-time data from the smart meter. MCs would not be responsible for delivering real-time data to any device.
- MCs would be required to implement appropriate protections to protect data from unauthorised access.

We assessed our draft rule against four assessment criteria

32 The Commission has considered the NEO and NERO[1] and the issues raised in the rule change request and assessed the draft rule against four assessment criteria outlined below. These criteria have not changed from the consultation paper.

33 The draft rule would contribute to achieving the NEO and NERO by:

- **Delivering good consumer outcomes** - our draft rule would ensure all consumers have access to real-time data from smart meters, at no charge, in the long term. Our draft rule would also facilitate simple access to real-time data to support good customer experiences when accessing real-time data.
- **Improving market efficiency** - our draft rule would lower the cost of managing CER by reducing the cost of accessing real-time data. It would also reduce the cost of any future services that use real-time data to deliver value for consumers.
- **Encouraging innovation and maintaining flexibility** - easy access to real-time data that is interoperable facilitates new services that could use real-time data to deliver value for consumers. Our draft rule would facilitate a flexible approach to accessing real-time data from smart meters to enable MCs to provide a range of solutions to access real-time data.
- **Facilitating smooth implementation** - industry would have until January 2028 to implement the draft rule. This is sufficient time for industry to update and consider relevant procedures and guidelines. Our draft rule would leverage the existing responsibilities of market participants to implement the draft rule.

1 Section 7 of the NEL and Section 13 of the NERL.

We are seeking stakeholder feedback on the costs and benefits of our draft rule

34 The costs of meters with embedded real-time data communications capability mean that this draft determination is estimated to result in a one-off cost of approximately $15 per meter, for those meters installed from 2028. This is equivalent to approximately $1 per meter per year, as the useful life of a meter is approximately 15 years. These estimates include the incremental costs of meters with new min specs and other upfront implementation costs of the rule. We expect these costs could reduce over time.

35 We are seeking stakeholder views on whether these cost estimates are reasonable and whether the benefits to consumers would outweigh these costs. We are also seeking stakeholder feedback on the broader assumptions underpinning our draft determination and whether our draft rule would deliver its intended outcome.

36 More specifically, we are seeking stakeholder feedback on the questions below.

Question 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?

Question 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?

Question 3: Do you agree with the costs the CBA estimates would be incurred to implement our draft rule? Would these costs decrease over time?

Question 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?

Question 5: What information would be useful for consumers to help them determine if accessing real-time data is beneficial and if any charge to them, to upgrade the meter, is reasonable?

Question 6: Would any other regulatory mechanisms better enable all consumers to access real-time data from smart meters, at low cost to the market?

Question 7: We proposed a definition of real-time data and a requirement 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?

Question 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?

Question 9: Would our draft rule introduce appropriate security measures to protect customer information from being accessed by unauthorised parties?

How to make a submission

We encourage you to make a submission

Stakeholders can help shape the solution by participating in the rule change process. Engaging with stakeholders helps us understand the potential impacts of our decisions and contributes to well-informed, high quality rule changes.

How to make a written submission

Due date: Written submissions responding to this draft determination and draft rule must be lodged with Commission by 23 October 2025.

How to make a submission: Go to the Commission's website, www.aemc.gov.au, find the "lodge a submission" function under the "Contact Us" tab, and select the project reference code ERC0399.[2]

Tips for making submissions on rule change requests are available on our website.[3]

Publication: The Commission publishes submissions on its website. However, we will not publish parts of a submission that we agree are confidential, or that we consider inappropriate (for example offensive or defamatory content, or content that is likely to infringe intellectual property rights).[4]

Next steps and opportunities for engagement

There are other opportunities for you to engage with us, such as one-on-one discussions or industry briefing sessions.

The Commission will hold a **public forum on Thursday, 2 October 2025**. Please see a link on the project webpage to register.

You can also request the Commission to hold a public hearing in relation to this draft rule determination.[5]

Due date: Requests for a hearing must be lodged with the Commission by 18 September 2025.

How to request a hearing: Go to the Commission's website, www.aemc.gov.au, find the "lodge a submission" function under the "Contact Us" tab, and select the project reference code **ERC0399.** Specify in the comment field that you are requesting a hearing rather than making a submission.[6]

For more information, you can contact us

There are other opportunities for you to engage with us, such as one-on-one discussions or industry briefing sessions. Please contact the project team with questions or feedback at any stage at submissions@aemc.gov.au.

2 If you are not able to lodge a submission online, please contact us and we will provide instructions for alternative methods to lodge the submission.

3 See: https://www.aemc.gov.au/our-work/changing-energy-rules-unique-process/making-rule-change-request/our-work-3.

4 Further information about publication of submissions and our privacy policy can be found here: https://www.aemc.gov.au/contact-us/lodge-submission.

5 Section 101(1a) of the NEL and 258(2) of the NERL.

6 If you are not able to lodge a request online, please contact us and we will provide instructions for alternative methods to lodge the request.

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1 The Commission has made a draft determination

The Commission's draft determination is to make a more preferable draft electricity rule and more preferable draft retail rule in response to a rule change request from Energy Consumers Australia (ECA). The more preferable draft electricity rule and more preferable draft retail rule are together referred to as the draft rule for the purposes of this draft determination.

The draft rule would enable a future where all consumers could access real-time data from smart meters at no charge. We are seeking feedback on this draft determination and draft rule.

1.1 Our draft determination would benefit consumers

As part of the Australian Energy Market Commission's (AEMC) vision of our shared energy future, we considered that improving data flows is essential for the transformation of our energy system into one that is smarter, more flexible, responsive to consumer needs and more affordable.[7]

The deployment of new technologies across the grid makes Australia's energy system increasingly rich in data. A growing number and variety of devices are creating and potentially sharing data as they connect to the system, such as smart meters. However, the system faces challenges in accessing and coordinating disaggregated pieces of information to draw meaningful insights and make effective decisions.

One of those challenges relates to access to real-time data on consumers' energy use, both by consumers themselves and by organisations that can use the data to support consumers. Addressing this challenge is the focus of our draft rule.

1.1.1 Our draft rule would introduce a framework to enable consumers and their appointed representatives to access real-time data from smart meters

The Commission considers that all consumers should have access to real-time data as part of their electricity service. This is because consumers can derive a range of value from real-time data. Appendix A explains the value of real-time data in more detail.

As discussed in later chapters, we consider that consumers should be able to access real-time data at low cost, and enabling access to real-time data from smart meters would lower the cost of accessing real-time data for all consumers.

Our draft determination is to:

- enable all consumers to request access to real-time data from the smart meter from 1 January 2028
- enable customer appointed representatives who have the customer's consent and are accredited by the Australian Energy Market Operator (AEMO) to also access the data
- change the meter minimum service specifications (min specs) so that all new meters installed from 1 January 2028 would be capable of communicating real-time data
- enable customers with new meters installed from 2028, which would have the new min specs, to access real-time data at no charge.

Access at no charge does not mean that consumers would not incur any costs to access real-time data. It means that consumers could access the service without being charged an upfront fee, and the costs of providing access would be spread across all consumers and recovered through consumers' bills, consistent with how the costs of metering services are already recovered.

7 AEMC, *A consumer-focused net zero energy system: The AEMC's vision for our shared energy future*, 10 October 2024, p. 23.

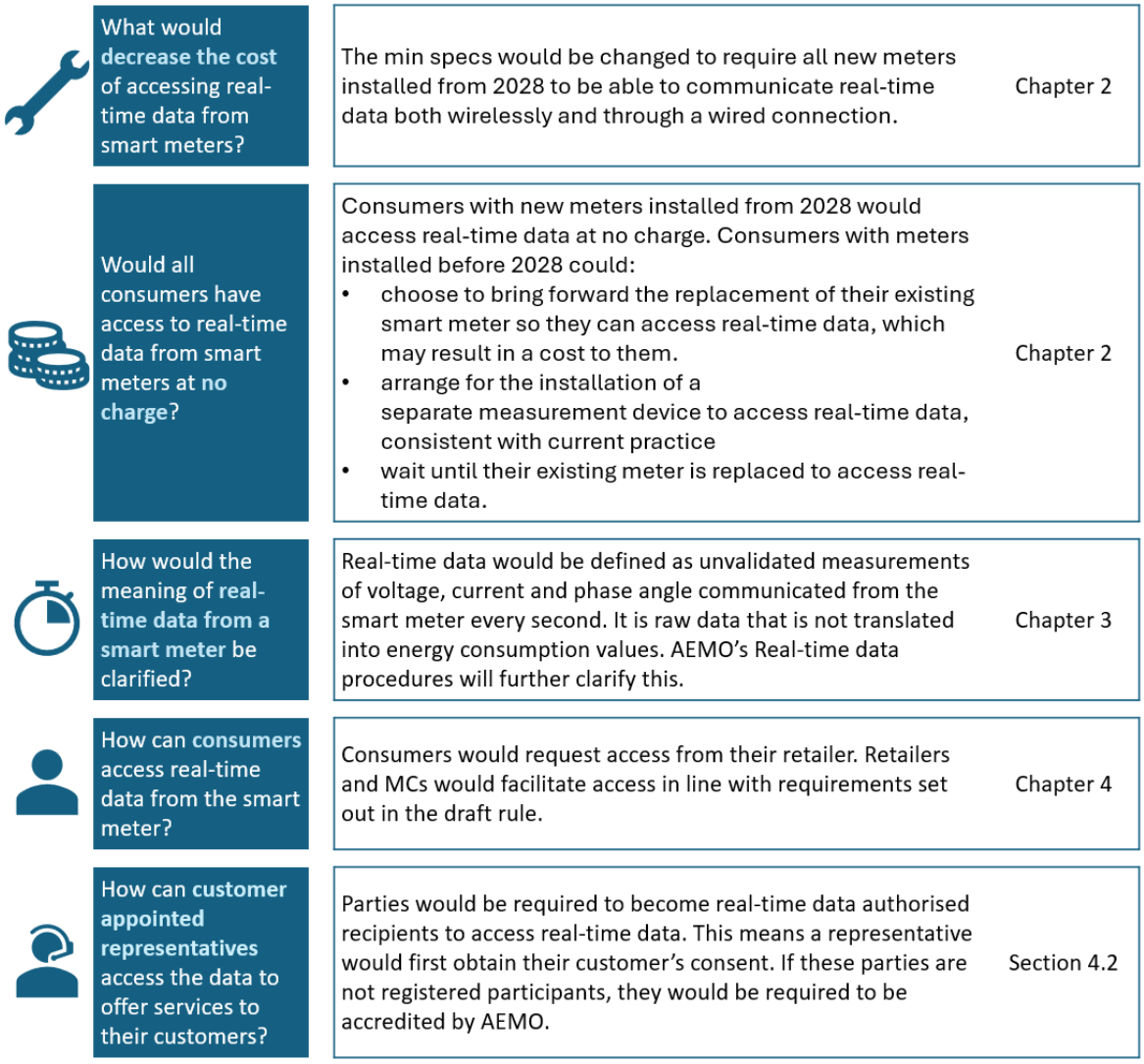
We consider that this approach under the draft rule imposes lower costs on consumers than the rule change request proposal and so better contributes to the achievement of the NEO and the NERO.

Our draft rule would benefit consumers, who can use real-time data inform their energy choices, including to help manage their consumer energy resources (CER). Real-time data can also be used for other services that would deliver value for consumers now and into the future, such as services that support the integration of CER into the grid and help lower overall system costs.

Our draft rule would also improve data availability for other relevant parties that service consumers where they have the consumer's consent. Better access to more data can enable a more competitive and innovative market for consumer energy services, contributing to better products and services and lower costs for consumers.

The Figure 1.1 below summarises the elements of the real-time data access framework under our draft rule. These are discussed in detail in chapter 4.

Figure 1.1: Key elements of the framework under our draft rule



Source: AEMC

Question 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?

1.2 We considered multiple factors when making our draft determination

1.2.1 Our draft rule is shaped by the Commission's Metering Review findings

Our *Review of the regulatory framework for metering services* (metering review) identified that the current regulatory settings for metering services may not maximise the value of data for consumers. We found that under the current regulatory framework:[8]

- consumer access to smart meter data is limited to historical billing and settlement data, or representations of estimated consumption data through their retailer's app
- consumers are unable to access real-time data from the smart meter transparently, seamlessly, and in an easy-to-understand or useable way
- neither consumers nor market participants can share real-time data in a way that captures potential economies of scale and scope.

Appendix A further explains the challenges to accessing real-time data.

The metering review found that providing access to real-time data would benefit consumers. We considered that access would enable consumers to maximise the benefits smart meters offer by using data from the meter to inform better energy management practices. We recommended changes to the regulatory framework to provide clarity and certainty for accessing and sharing real-time data.[9]

The metering review acknowledged that a subsequent rule change would need to develop a framework for consumers to access real-time data based on the costs and benefits of various approaches.

ECA's rule change request, submitted in response to the metering review recommendation, seeks to enable consumer access to real-time data from smart meters at no charge to consumers.

We published a consultation paper in October 2024 to seek stakeholder feedback on the elements of the rule change request. Across 39 submissions, stakeholders generally supported our ambition to enable access to real-time data from smart meters.

1.2.2 Stakeholders supported our directions paper approach, but some stakeholders wanted access to be available at no charge, sooner

We published a directions paper in January 2025, which outlined our preliminary direction for the rule change request, reflecting feedback received from stakeholders on our consultation paper.

We received 41 submissions from stakeholders on our directions paper. Stakeholders agreed that MCs and retailers should facilitate access to real-time data from smart meters.[10]

As discussed in the next chapter, stakeholders supported our proposed approach because it sought to achieve universal access to real-time data while minimising the costs to consumers.

8 AEMC, Metering Review, p.129.

9 AEMC, Metering Review, p. 129.

10 Submissions to the directions paper: AEMO, p. 1; Australian Energy Council, p. 1; SenseLabs, p. 1; Bluecurrent, p. 1; RedEnergy, p. 1; PlusES, p. 1; ENGIE, p. 1; SA Power Networks, p. 1; Origin, p. 1; Clean Energy Council, p. 1; Intellihub, p. 1; Tecasa, p. 1; Landis+Gyr, p. 1; CitiPower, p. 1; Powercor, p. 1; United Energy, p. 1; Energy Queensland, p. 1; Ausnet, p. 1; Energy Australia, p. 1.

Retailers and MCs supported the framework outlined in the directions paper but suggested that the draft rule should provide further clarity on what MCs and retailers are required to do to enable access to real-time data.[11] This additional clarity is discussed in chapter 4 below.

Some stakeholders suggested that access to real-time data, at no charge, should be available earlier than 2040. They considered that the benefits of bringing forward access, at no charge, may be higher than the cost. [12]

1.2.3 The CBA results helped identify low-cost approaches to enable access to real-time data from smart meters, sooner

Given material uncertainties surrounding the direct costs and benefits associated with different use cases for real-time data and various approaches to achieving universal access, we engaged Oakley Greenwood to conduct a cost-benefit analysis (CBA) of different options to deliver universal access to real-time data from smart meters.

We are seeking stakeholder feedback on the CBA as part of consultation on this draft determination. Oakley Greenwood's CBA is described in the draft report published alongside this draft determination.

As explained in appendix B.3, the CBA estimates that:

1. changing the min specs is relatively low cost
2. implementation and administrative costs would also be low cost
3. the costs of bringing forward the replacement of meters before 2040 would be high.

As discussed further in chapter 2, these findings support:

- changing the min specs to ensure that all consumers would have meters in the future that can provide access to real-time data at low cost.
- preventing the cost of replacing or retrofitting meters, before the meters are due to be replaced, from being socialised.

These changes would impose slightly higher costs relative to the directions paper approach. However, we consider that these costs are warranted as the changes would encourage more consumers to access real-time data from smart meters. This would increase benefits, including more broader benefits discussed in the next section.

1.3 Our determination would deliver broader benefits to all consumers by supporting reform to unlock the value of CER

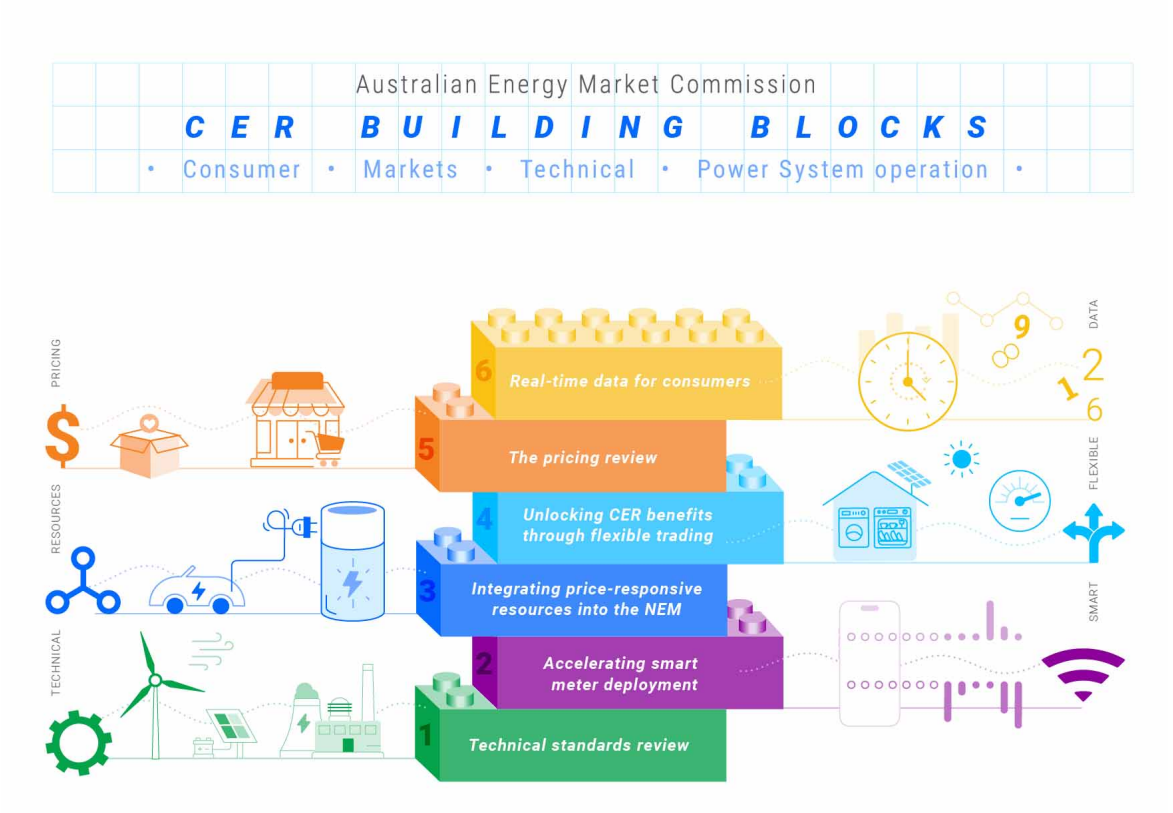
The Energy and Climate Change Ministerial Council's National CER Roadmap (the Roadmap) provides a national approach to reforms to ensure Australians can harness the full potential of CER.[13]

The Commission's CER work program outlined in Figure 1.2 supports the objectives of the Roadmap. Elements of these reforms are interdependent meaning they have greater benefit to consumers as a package rather than as standalone reforms. Enabling access to real-time data from smart meters is part of this reform package.

11 Submissions to the directions paper: Powershop, p. 2; Intellihub, p. 2.
12 Submissions to the directions paper: Energy Consumers Australia, p. 5; Energy Policy Research, p. 4; Erne Energy, p. 1.
13 See Roadmap here.

We consider that access to real-time data from smart meters could facilitate innovative services that support the integration of CER into the grid and help lower overall system costs.

Figure 1.2: The AEMC's work program to unlock the value of CER



Source: AEMC

1.3.1 Reforms through the AEMC's pricing review could increase the value of real-time data from smart meters

The *Pricing review: electricity pricing through a consumer-driven future (pricing review)* has extensively discussed issues with the current pricing arrangements that can encourage inefficient electricity consumption and export behaviours. Through the review, the Commission is contemplating reforms that could reduce these inefficiencies, thereby encouraging consumption and export patterns that are more compatible with lowering overall system costs.

To the extent that the pricing review manifests more efficient price signals, particularly for consumers with CER, the benefits of real-time data from smart meters may be higher than estimated by the CBA. This would increase the net benefits of the reforms proposed in this draft determination and rule.

1.3.2 Our draft rule would change the min specs of some meters that are installed as part of the accelerated rollout

The AEMC's Accelerating smart meter deployment rule change[14] enables the universal uptake of smart meters by 2030 by accelerating their deployment to consumers in a timely and cost-effective way, and with appropriate consumer safeguards in place.

Our draft rule would require meters installed between 2028 and 2030, as part of the accelerated rollout, to have the capability of communicating real-time data.

We recognise that consumers who already have smart meters, and those receiving new meters as part of the accelerated rollout between 2025 and 2027, may get access to real-time data from the smart meter at a later date, or may instead choose to pay for access either via the smart meter or through an alternative device.

Our draft rule would nonetheless ensure that all consumers would, in the future, have meters with the in-built functionality to communicate real-time data, so all consumers can access real-time data at no charge.

14 AEMC, *National Electricity Amendment (Accelerating smart meter deployment) Rule 2024 No.20* and the *National Energy Retail Amendment (Accelerating smart meter deployment) Rule 2024 No.6*.

2 Our draft rule would progressively embed functionality in meters to support access at no charge for some consumers sooner and all consumers later

Box 1: Summary

Consistent with ECA's rule change request, the Commission considers that all consumers should have access to real-time data at no charge. This would unlock the value of real-time data for all consumers, rather than the service being available only to those who can afford to pay.

To achieve this goal, we consider that all consumers should be able to access real-time data directly from smart meters. This would avoid the need to install any other devices to access real-time data.

To achieve this objective, at low cost to consumers, our draft determination is to:

- change the min specs to require all new meters installed from 2028 to be able to communicate real-time data wirelessly and through a wired connection
- enable consumers with new meters installed from 2028 to access real-time data at no charge
- enable consumers with meters installed before 2028 to:
  - pay for the existing smart meter to be retrofitted or replaced to access real-time data if retailers charge them for access
  - arrange for the installation of a separate measurement device to access real-time data, consistent with current practice
  - wait until the existing meter is replaced to access real-time data.

Our draft determination is an alternative to the scenarios analysed by the CBA. However, based on the findings of the CBA, we consider that this approach would impose low costs on consumers and increase the likelihood that more customers will access and respond to real-time data, driving overall lower costs to all customers.

We consider that our proposed approach is significantly less costly than the rule change request proposal. Appendix B discusses the key findings of the CBA.

2.1 Stakeholders considered that we should enable access to real-time data at the lowest cost practicable

We considered that the rule change request proposal would impose high costs on all consumers, because it would lead to the early replacement of a significant number of smart meters. We considered that these costs could overwhelm the benefits of the proposal.

Our directions paper proposed a lower cost approach. We proposed to require retailers to provide all customers access to real-time data from smart meters, at no charge, 15 years after our rule would commence.[15]

This would mean that retailers could only charge customers for access to real-time data for a period of 15 years. We proposed requiring the AER to publish the prices retailers would charge

15 AEMC, directions paper, pp. 11-17.

customers for access, recognising that additional price transparency could encourage reasonable charges for consumers.

We considered that our directions paper approach would impose lower costs on consumers, relative to the rule change proposal. This is because it would only result in meters being replaced once they had reached the end of their economic lives, not earlier.

Under the directions paper proposal, industry would have the flexibility to decide how to enable access, at no charge, after 15 years. They could do this by installing meters with higher specs capable of enabling access to real-time data without using other devices, or some other means.

Stakeholders acknowledged that enabling access, at no charge, means that costs are spread across all consumers, and supported a user-pays approach to avoid socialising the costs of early replacement of meters across all consumers.[16] Stakeholders noted that even after 15 years, some costs would still need to be socialised, and it is appropriate to give industry time to develop solutions that would make these costs as low as practicable.[17]

Stakeholders also supported requiring the AER to publish charges.[18]

The Commission agrees with stakeholders that costs that would be spread across all consumers should be as low as practicable. We consider that this means that the costs of early meter replacement should not be socialised.

However, some stakeholders considered that the 15-year transition period is unnecessarily long.[19] Stakeholders suggested undertaking a CBA to assess the costs of enabling access to real-time data, at no charge, earlier than indicated in our directions paper. Stakeholders also considered that no more meters should be installed that cannot enable access to real-time data to ensure more consumers do not face high costs of accessing real-time data.[20]

The Commission agrees with stakeholders that, if access can be delivered at low cost, not all consumers should have to wait 15 years to access real-time data from smart meters at no charge.

We consider that our draft rule would achieve this outcome. We consider it would be materially less costly than the rule change request proposal and therefore is likely to better contribute to the achievement of the NEO and the NERO.

2.2 Changing the min specs from 2028 would increase benefits at low cost

The min specs requirements in Table S7.5.1.1 of Chapter 7 of the NER set out the minimum functionality all meters are required to have.[21] Currently, meters are not required to have the capability of providing access to real-time data.

Our draft determination is to require all new smart meters (type 4 and type 4A metering installations) installed from 1 January 2028 to have the in-built functionality to enable both wired and wireless access to real-time data.[22]

16 Submissions to the directions paper: Energy Queensland, p. 1; Bluecurrent p. 2; AGL. p. 3 ; Alinta, p. 4; Energy Locals, p. 2.

17 Submissions to the directions paper: Energy Queensland, p. 1; Bluecurrent p. 2; AGL. p. 3 , Alinta, p. 4; SMA Australia, p. 3.

18 Submissions to the directions paper: CEC, p. 4, Tecasa, p. 4; Dr Ali Pourmousavi Kani & Rui Yuan, p. 10.

19 Submissions to the directions paper: Western Sydney University, p. 1; Ausgrid, p. 3; Erne Energy, p. 1; ECA, p. 6; Tecasa, p. 3; Avionix inc, p. 2; Endeavour Energy, p. 2; Energy Policy Research, p. 3; Rosetta Analytics, p. 1; Justice and Equity Centre, p. 5; Essential Energy, p. 7.

20 Submissions to the directions paper: Erne Energy, p. 1; ECA, p. 6; SMA Australia, p. 2; National Seniors Australia, p. 2.

21 Clause S7.5.1 of the NER.

22 Clause S7.5.1(e) and new row (g) in Table S7.5.1.1 of the Draft National Electricity Amendment (Real-time data for consumers) Rule (**Draft Electricity Rule**).

We consider that changing the min specs is a low-cost way of providing the option to access real-time data from smart meters to the greatest number of consumers. An excerpt of the proposed amendment to the min spec table in the draft electricity rule is set out below.

Table 2.1: Changes to the min spec

Service	Description	Access party
(g) real-time data access service	The wireless and wired communication of real-time data.	Real-time data authorised recipients

Source: The draft amendment to Item (g) of table S7.5.1.1 in the draft electricity rule.

We consider that it is not appropriate for the min specs to specify what wired and wireless access solutions should look like. As discussed in chapter 3, the definition of real-time data and the requirements in AEMO's real-time data procedures would specify what access solutions should look like.

Based on stakeholder discussions and feedback, we consider it likely that meters would use Wi-Fi to communicate real-time data wirelessly. This is because Wi-Fi solutions would likely satisfy the required speed and interoperability expectations set out in section 3.2.

We consider that wired communication would likely require an accessible data communications port (port). As discussed in appendix A.4.1, access to these ports is restricted for security reasons. To satisfy security obligations under the draft rule, new ports would have to be designed and added to the meter such that they can be easily accessed without compromising the security and integrity of the meter.

2.2.1 Accessing real-time data from a smart meter through Wi-Fi or a data port is currently the lowest cost way to access real-time data

Smart meters already produce real-time data at no additional cost to customers. However, as explained in appendix A.4, it is difficult to access real-time data from smart meters. This is because many smart meters currently installed do not have Wi-Fi functionality or an accessible port by which the real-data could be communicated.

If a customer had a smart meter already installed at their premises with Wi-Fi functionality or a port, there would be no material costs to access real-time data. The CBA estimates that the cost of a smart meter with Wi-Fi functionality and a port is approximately $10 more than a meter without these features.

This means that to have the option to access real-time data, at no additional cost, a customer would need to pay $10. Spread across the life cycle of the meter, this would be approximately 66 cents per annum, excluding other upfront implementation costs of the rule.[23] We consider that economies of scale could further drive down the incremental cost of changing the min specs, and that it is unlikely that retailers would pass on this capital cost to consumers to increase consumer bills.

This is lower cost than other existing alternatives to access real-time data. The CBA estimates the cost of accessing real-time data:

23 This assumes a life cycle of 15 years for the meter.

- from a smart meter without Wi-Fi functionality and a port would be approximately $500-$700. This is because the meter would either need to be retrofitted with communications functionality or replaced with a meter that has this functionality. The customer would pay the cost of the retrofit or the cost of bringing forward the replacement of the meter. A large part of these costs would be the cost of a technician needing to visit a customer's premises to change the metering installation.
- using a current transformer (CT) would be approximately $50.
- using a power meter would be approximately $450.

2.2.2 Changing the min specs enables all consumers to access real-time data in future at no material cost to the market

Every new meter installed for a small customer must meet the min specs in the Rules.[24] Including wireless and wired real-time data communications functionality would ensure that all new meters would have this functionality at minimum. This means that every customer that gets a new meter would be able to access real-time data at no material additional cost to the MC.

Consequently, in the long-term, when every customer has these new meters installed at their premises, every customer would have the option to access real-time data from smart meters at no material additional cost to the market. We therefore consider that our draft rule would be significantly less costly than the rule change request proposal and is therefore likely to better contribute to the achievement of the NEO and the NERO.

2.2.3 Changing the min specs improves market certainty and supports interoperability to unlock broader benefits for consumers

The approach proposed in our directions paper enabled MCs to provide a broader set of solutions to make real-time data accessible from smart meters. This would mean that there would be a broader range of costs to access real-time data from the smart meter, as well as a broader range of technology needed to access real-time data from different types of metering installations.

We acknowledge that changing the min specs would embed a smart meter with wireless and wired real-time data communications functionality as the primary technology to access real-time data.

We consider that this is appropriate because, as discussed above, alternative ways of accessing real-time data are more costly at present. However, we acknowledge that innovation may deliver other lower cost alternatives to enable customers to access real-time data.

Changing the min specs would also create greater certainty about the functionality of all new meters. This would give the market greater clarity of the types of technology it should invest in to access real-time data from the smart meter and deliver value for consumers. This would also make smart meters more interoperable because the market would not need to develop different devices to communicate with different smart meters.

Greater interoperability supports a more integrated system, which would drive down system and wholesale costs for all consumers. It also means that a broader range of technology would be able to access real-time data from smart meter which encourages innovation and could lead to a broader range of services that provide value to customers.

24 Clauses 7.8.3(a) and S7.5.1 of the NER.

2.2.4 Requiring both wireless and wired communications functionality makes real-time data more accessible

In bi-lateral engagement with stakeholders, they expressed that neither wireless nor wired communication would alone satisfy all use cases of real-time data. We consider that all smart meters should enable both ways to access real-time data.

This would enable more customers and their appointed representatives to access real-time data from smart meters which would increase benefits to consumers. This is because the more parties that access real-time data from smart meters, the less the market needs to spend to access real-time data. This is because the market would be avoiding the cost of alternative pathways to access real-time data.

The Commission acknowledges the risk that even with a change to the min specs, some parties may opt to access real-time data using other devices that offer more control and certainty. However, as discussed in the section below, the cost of our draft rule would be low. This means only a small proportion of customers would need to access real-time data from smart meters for our draft rule to benefit all consumers. Given stakeholder support for this rule change, we consider that it is likely that many parties would access real-time data under our draft rule.

In response to our directions paper, some stakeholders agreed that changing the min specs is appropriate.[25]

Question 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?

2.2.5 Changing the min specs imposes low costs on customers who do not want access to real-time data

The cost of changing the min specs would be borne by all consumers. Smart meters with real-time data functionality are marginally more costly than those without, and therefore, over time, all consumers would be required to pay slightly more capital costs for metering services (66 cents per annum per meter).

In addition to capital costs, MCs and retailers would incur implementation costs related to facilitating access to real-time data. We consider that these costs would also be spread across consumers.

The CBA finds that these implementation costs would likely be low (approximately $5 per NMI upfront).

We expect these costs would be indiscernible in a final bill to consumers, even if a retailer chooses to pass these costs through. As discussed in section 2.6, we consider that the continued competition in the retail and metering services markets would reduce these costs over time.

The Commission acknowledges that not all consumers may want or need real-time data from the smart meter. From an equity perspective, these consumers would face higher metering services costs without necessarily experiencing direct benefits. We nonetheless consider this outcome

25 Submissions to the directions paper: SMA; p. 3; Erne Energy, p. 2.

appropriate given the broader benefits of this rule change would likely outweigh the low cost of implementing our draft rule.

Question 3: Do you agree with the costs the CBA estimates would be incurred to implement our draft rule? Would these costs decrease over time?

2.2.6 Changing the min specs from 2028 supports efficient implementation

The Commission considers that the new min specs should only apply to new meters installed from 1 January 2028. Assuming any final rule is made in 2025, this gives MCs approximately two years to procure these meters.

We consider that two years is sufficient time for MCs to:

- consider the requirements of any final rule and AEMO's subsequent real-time data procedures.
- use existing stock to minimise sunk costs.
- engage with metering manufacturers and procure meters that are compliant with the new min specs.

We do not consider that it is feasible for industry to universally install smart meters with new min specs prior to 2028.

We recognise that meters installed from 2028 under the requirements of the Accelerating smart meter deployment rule would be required to comply with the new min specs.

2.3 Our draft rule would increase the number of consumers accessing real-time data from smart meters.

Our proposal in the directions paper targeted imposing the lowest costs on all consumers, but those consumers who wanted access to the data before 2040 would be required to pay a charge.

We consider that this is likely to reduce the number of consumers who would otherwise choose to access real-time data from smart meters and, therefore, reduce the number of consumers that might change their behaviour in a way that could deliver overall lower costs to consumers. We are therefore minded to introduce a framework that contributes positively to adoption of a real-time data service.

Based on stakeholder consultation undertaken to date, we consider that once an upgraded meter is installed at a customer's premises, the cost of accessing real-time data from the new meter would be immaterial to the market.[26] This could include, for example, administrative costs involved in supporting the customer, or customer appointed representative, in establishing a connection to the data stream.

Our draft determination is therefore to require retailers to facilitate access to real-time data at no charge if the customer has a new meter installed after 1 January 2028 or has a meter that already meets the new min specs.[27]

This means any customer with a new meter installed from 1 January 2028 would not need to pay any charge to access real-time data from the smart meter.

26 MCs would directly bear any costs associated with the smart meter. This may be passed to retailers who may spread the cost to all customers.

27 Division 9B, rule 59E(2) of the Draft National Energy Retail Amendment (Real-time data for consumers) Rule 2025 (Draft Retail Rule).

This means that compared to our directions paper approach, our draft determination would enable more consumers to access real-time data from smart meters, at no charge, before the end of 15 years.

This is because bringing forward access at no charge for consumers with meters installed from 2028 would increase the number of consumers accessing real-time data from smart meters.

This greater rate of access to real-time data from smart meters is expected to deliver a greater benefit to all customers.

We have not attempted to quantify how many more customers would do so, but we expect, overall, the number of customers who will choose to access and respond to real-time data will be greater under our draft rule than under the proposed approach in the directions paper that had all customers continuing to have to pay a charge until 2040.

Based on the Legacy Meter Replacement Plans published this year, approximately 15 per cent of customers across New South Wales, South Australia, the Australian Capital Territory and Queensland would receive a new meter that meets the new min spec between 2028 and 2030. It is unlikely that many meters in Tasmania and Victoria would have real-time data communications functionality by 2030 because the rollout of meters would likely be completed before 2028.

2.3.1 Customers would get access to real-time data, at no charge, when the meter is upgraded from 2028

We consider that customers should get access to real-time data, at no charge, as part of the natural meter replacement process, in accordance with clause 7.8.3(a) of the NER.

This means that the cost of accessing real-time data would be inconsistent across customers in the near term, until all meters have been upgraded to those with real-time data capability in accordance with the requirements of the new min specs. Depending on when the existing meter was installed, some customers may have to wait longer before the meter at their premises is replaced with one that enables access to real-time data, at no charge. The Commission acknowledges that customers do not generally have control over what type of meter is installed, or when.

This does not mean that customers would have to wait until the meter is replaced to access real-time data. Our draft rule would give all customers the option to access real-time data from smart meters from 2028, whether they receive a new meter in 2028 or at a later time. While some customers would get access, at no charge, once the meter is replaced, as discussed in section 2.4 below, those customers whose meters are not due for replacement until a later time, may choose to request an early meter replacement that their retailer may charge them to enable real-time data access from the meter, or alternatively, they could install an alternative device of their choosing, consistent with current practice.

We consider that it is unlikely that any customer who would materially benefit from real-time data would wait 15 years to access it.[28] We consider that these customers would either pay to access real-time data from the smart meter by replacing it early (because the value to them outweighs the cost), or that the market would provide these customers with alternative pathways to access real-time data.

This approach is in contrast with that proposed in our directions paper, which would have enabled access for all customers, at no charge, within 15 years from the commencement of any rule made.

28 Or within whatever timeframe their meter is due for replacement.

Prescribing a date when access must be provided, at no charge, would effectively encourage all meters to be replaced before that date. As noted by some stakeholders, meters may have useful lives greater than 15 years.[29] The Commission considers that consumers should derive the maximum value from smart meters. We consider that it would be inefficient to replace meters before the end of their useful lives for customers who have not requested real-time data. Therefore, the draft rule does not prescribe an end date by which all meters must have real-time data functionality.

2.4 Retailers may charge customers with meters installed before 2028 who request the meter be retrofitted or replaced with a meter that meets the new min specs

Meters installed before 1 January 2028 may need to be retrofitted or replaced with a new meter that has the functionality to enable access to real-time data.

As discussed in chapter 4, retailers and MCs would facilitate the access to real-time data from smart meters.

To avoid socialising the cost of replacing meters early or retrofitting meters, our draft determination is to enable retailers to charge a customer, or an appointed representative, for facilitating access to real-time data if the meter was installed prior to 1 January 2028 and does not already meet the new min specs [30] In this case, the retailer must offer the customer the choice of either retrofitting or replacing the meter to enable real-time data access, and may require payment of the real-time data facilitation charge.[31]

This charge must not exceed the reasonable cost retailers would incur to facilitate access to real-time data. [32] We consider that this charge should only include upfront costs, and no other ongoing administrative costs should be included in this charge.

Importantly, customers are not being charged for the data that the smart meter produces, but rather, are being charged for the mechanism required to facilitate access to the data.

The Commission considers that all customers should have a choice to access real-time data from smart meters regardless of what smart meter is installed at the customer's premises. However, under our draft rule, the cost of accessing real-time data from smart meters installed from 2028 and before 2028 are materially different.

As explained earlier, we consider that it is appropriate to socialise the costs of enabling access to real-time data for consumers with meters installed from 2028.

However, the costs of enabling access to real-time data from smart meters installed before would be high and should not be socialised. As discussed in appendix B.2, the CBA shows that socialising the cost of replacing most meters before the end of its economic life would impose high costs on consumers.

For this reason, our draft rule is more efficient than the approach proposed in the rule change request. Under our draft rule, unlike the rule change request proposal, the cost of retrofitting or bringing forward the replacement of meters would not be socialised. This would mean that the cost of implementing our draft rule would be low, and the benefits would likely outweigh these

29 Sense Labs, submission to the directions paper, p. 3.
30 Division 9B, rules 59E(2)(b) and (3) and 59F of the Draft Retail Rule.
31 Division 9B, rule 59F of the Draft Retail Rule.
32 Division 9B, rule 59F(1)(a)(ii) and the definition of 'real-time data facilitation charge' in rule 3 of the Draft Retail Rule.

costs. We therefore consider that our draft rule is likely to better contribute to the achievement of the NEO and the NERO than the rule change request proposal.

Despite the cost to bring forward meter replacement to get a higher spec meter, some customers may consider it beneficial for them to pay to access real-time data from the smart meter. We consider that customers are best placed to decide whether paying to access real-time data from meters installed before 2028 is beneficial for them.

Importantly, the cost of bringing forward the replacement of a meter is not fixed. As a meter nears the end of its economic life, the cost of replacing the meter is lower. Some customers may then choose to pay to replace the meter closer to the end of its economic life to access real-time data. Alternatively, as discussed in section 2.5, customers could also choose other pathways to access real-time data that may satisfy their use case.

Question 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?

2.4.1 Retailers may only charge once per premises

Once a meter has been retrofitted or replaced with a new meter that can enable access to real-time data, there would be no additional cost in the future.

This means once access is enabled for one party, the incremental cost to enable access for another party at the same premises is immaterial. Hence, there should be no charge for any subsequent requests to access real-time data.

Our draft determination is to prohibit retailers from charging more than once per premises to facilitate access to real-time data.[33]

This prevents retailers from charging customers and real-time data authorised recipients to access real-time data from a smart meter where real-time data is already accessible.

In practice, this means that while the first party to request access to real-time data at a premises may pay a charge in some cases, subsequent parties who request access would not be charged.

2.4.2 Customers may pay the charge in instalments

The Commission acknowledges that the cost of retrofitting or replacing a meter early is material for some consumers. Nevertheless, it may be beneficial for consumers to pay this charge instead of using alternative ways to access real-time data.

Some consumers may find it difficult to pay this charge upfront. Our draft determination is to require retailers to offer customers the option to pay the charge as a one-off payment, or in instalments - whichever suits the customer.[34]

If a customer elects to pay the charge in instalments but subsequently terminates their customer retail contract early, a retailer may charge the outstanding amount as an exit charge.[35]

33 Division 9B, rule 59F(2) of the Draft Retail Rule.
34 Division 9B, rule 59F(3) of the Draft Retail Rule.
35 Division 9B, rule 59F(4) of the Draft Retail Rule.

2.4.3 The charge would reflect the reasonable costs the MC would incur

The costs that retailers may charge customers to facilitate access to real-time data would include the costs that MCs would pass on to retailers.

This is because MCs would be responsible for replacing or retrofitting the meter to enable access to real-time data from the smart meter.

The costs that MCs would incur to retrofit or bring forward the replacement of a meter would be passed onto retailers under the commercial agreements between retailers and MCs for metering services.[36]

Similarly to how retailers may charge customers, our draft determination is to require MCs to only charge retailers the reasonable costs incurred to facilitate access to real-time data, and only once per connection point. [37]

2.4.4 It is unlikely that our draft rule would facilitate unreasonable charges

Under our draft rule, when a retailer receives a request from a customer to facilitate access to real-time data, the retailer would request the MC to facilitate access. After receiving a request, the MC would be required to notify the retailer whether the current meter installed at the premises complies with the min specs proposed under the draft rule.[38]

If it does not, the retailer would offer the customer the choice of retrofitting or bringing forward the replacement of the smart meter and inform the customer of any applicable charge. [39]

Customers currently do not have easy access to information about the current spec of the meter that is installed at their premises and therefore cannot verify for themselves whether they should be charged to access real-time data.

However, MCs and retailers would be in breach of the NER or NERR, respectively, if they were to charge customers for access to real-time data in cases where they are not permitted to. As discussed above, the draft rule would prohibit MCs from charging retailers to facilitate access to real-time data from meters installed from 2028 that already meet the new min spec requirements. Given the importance of compliance with this obligation, the Commission proposes that this provision of the draft rule should be classified as a tier 2 civil penalty provision.[40] This is discussed further in appendix D.5. Similarly, retailers are prohibited from charging a customer for access, where that consumer has a smart meter installed from 2028 or the meter already meets the new min specs.[41] However, the Commission has not proposed to recommend this particular provision be classified as a civil penalty provision.

Question 5: What information would be useful for consumers to help them determine if accessing real-time data is beneficial and if any charge to them, to upgrade the meter, is reasonable?

As discussed in section 2.6, we expect competition in the market for metering services to keep charges reasonable. In contrast to the proposed approach in our directions paper, we do not

36 See clause 7.6.1(b) of the NER.
37 Clause 7.15.7(f) and (g) of the Draft Electricity Rule.
38 Clause 7.15.7(d)(1) of the Draft Electricity Rule.
39 Division 9B, 59E(2)(b) and (3) of the Draft Retail Rule.
40 See the note under clause 7.1.5.7(f) of the Draft Electricity Rule.
41 Division 9B, rule 59E(2)(a) of the Draft Retail Rule.

consider that requiring the AER to report charges is the appropriate mechanism to ensure charges are reasonable.

We expect retailers to have many ways to meet consumer needs for real-time data that will not be comparable, and where customers want this data, they are likely to seek options from multiple service providers. Further, it is administratively costly to require retailers and the AER to report this information.

However, the Commission is open to other solutions that would help reduce the cost of accessing real-time data for consumers with meters installed before 2028 that do not meet the new min specs.

Question 6: Would any other regulatory mechanisms better enable all consumers to access real-time data from smart meters, at low cost to the market?

2.4.5 Vulnerable consumers are not exempt from this rule

In June 2025, the Commission made the *Improving consumer confidence in retail energy plans* final rule (retail plans rule).[42] The retail plans rule prohibits retailers from charging retail fees, except for network charges, to hardship customers, non-hardship customers experiencing payment difficulty and experiencing family violence (vulnerable customers).[43]

In bilateral discussions, stakeholders sought clarity over how the retail plans rule would apply in the context of a request to access real-time data from a smart meter. In this rule change, the AER submitted that customers experiencing payment difficulty and or hardship should not be charged to access real-time data.[44]

Our draft rule determination is to allow retailers to charge vulnerable customers for access to real-time data if the smart meter installed at their premises would be installed before 2028 and does not meet the new min specs.

The Commission considers that other reforms are better placed to ensure vulnerable customers can access tools that may help lower bills. This includes reforms that specifically consider ways to support vulnerable customers, such as reform that would progress from the AER's *Review of payment difficulty protections in the National Energy Customer Framework*.

Therefore, the draft retail rule amends rule 52A of the NERR, which was amended by the retail plans rule, so that retailers are not prevented from charging customers for facilitating access to real-time data from smart meters in those circumstances where the draft rule allows for charging.[45]

2.5 Customers may still choose other pathways to access real-time data

Some customers would benefit from paying to retrofit or replace meters earlier than their natural replacement cycle. For example, customers who value a more interoperable system and those who would otherwise need to install a power meter to access real-time data because of the nature of their CER system.

42 The *National Energy Retail Amendment (Improving consumer confidence in retail energy plans) Rule 2025 No.3*.

43 AEMC, Improving consumer confidence in retail energy plans, Rule determination, 19 June 2025, pp. 42-49.

44 AER submission to the directions paper, p. 2.

45 Schedule 1, item [2] of the Draft Retail Rule amends rule 52A, which will be consolidated into the NERR on 1 July 2026 and then subsequently amended by the Draft Retail Rule (if made) on 1 January 2028. See also Division 9B, rule 59F(5) of the Draft Retail Rule.

For other customers, alternative pathways to access data may be sufficient to satisfy their use cases either in the short term while they wait for the meter installed at their premises to be naturally replaced, or in the longer term:

- for CER customers who need access real-time data to manage CER under export limits, the CBA estimates that a CT would be lower cost than retrofitting or replacing a meter
- for customers who want to make informed energy choices, energy consumption at a day's lag can be accessed through the mechanisms described in appendix A.1. These customers may therefore not pursue a real-time data solution in advance of the meter being upgraded according to the existing replacement schedule.

ECA agreed that energy consumption data at a day's lag is beneficial for customers. ECA considers that, at a minimum, all customers with a smart meter should have ongoing access to energy consumption data at no more than 24 hours delay, provided in a manner easily accessible and digestible.[46] This would ensure that customers who do not have access to real-time data, at no charge, would have access to other forms of data that would sufficiently support more informed energy choices.

2.5.1 The Commission encourages retailers to improve energy data made available to consumers

A key benefit of smart meters is that retailers can receive data more frequently, at least once per day. Smart meters benefit all consumers because they make more data available to the market. This reduces costs for MCs and retailers, and ultimately, consumers.

Whilst the data itself is produced at no additional cost to customers, communicating the data can be costly. Retailers adopt various approaches in terms of communicating and presenting data to customers. Some retailers, for example, make energy consumption data available on mobile apps or web portals.

The Commission considers that energy consumption data is valuable to all customers to support more informed energy choices. However, we do not consider that all retailers should be required to provide this data in a specific format on an ongoing basis. The CBA found that an obligation of this nature on retailers would have no material benefit to consumers.

Many retailers already present energy consumption data to their customers through an app and/or a web interface. We consider that customers can choose a retailer whose data offering they value, including switching to retailers who offer better data products.

We encourage all retailers to improve their data offering to customers. In bilateral discussions, ECA has noted several key insights that customers would find valuable:

- kWh total per day and in regular intervals
- cost per day and in regular intervals
- import/export from the grid
- average kWh used daily
- average daily spend
- monthly trends
- daily energy consumption compared to your average
- carbon intensity of energy consumption

We consider that there are many best practice examples that retailers could consider, including:

46 ECA, submission to the directions paper, p. 4.

- Octopus Home in the United Kingdom
- Oxxio in the Netherlands

2.6 Competition is important to lower costs for consumers

The Commission considers that the markets for metering and CER services should be competitive to keep costs low for consumers.

2.6.1 Competition in metering services would help lower the costs of accessing real-time data.

In implementing recommendations from the *Power of choice review - giving consumers options in the way they use electricity*, the Commission introduced competition in metering services. We considered that shifting metering services from DNSPs to other metering service providers would lead to more efficient costs.

MCs compete for retail contracts. Competition between MCs is essential to ensure the market for metering services remains efficient.

Our draft rule would rely on competition to ensure that consumers with meters installed before 2028 or without the new specs do not pay unreasonable costs to access real-time data. Competition may also encourage MCs to offer better real-time data services.

2.6.2 Access to real-time data from smart meters supports competition in the market for CER services

As discussed in the directions paper, MCs' exclusive control of the smart meter may give them a competitive advantage in the market for CER services.[47] This is because MCs could exclusively leverage smart meter technology to provide CER services.

This creates barriers for third parties to compete on a level playing field. These parties would need to install other devices to provide services that smart meters may already be capable of providing. Third parties would incur additional costs to install these devices, which may make their service offering higher cost than services offered by the MC using the smart meter.

For example, currently, depending on the smart meter installed, MCs and third parties do not face similar costs to access real-time data. Third parties would have to incur the cost of additional devices to access real-time data. It would be difficult for third parties to provide some CER services, that require real-time data, at lower cost than an MC.

We consider that our draft rule would facilitate competition

Under our draft rule, any existing competitive advantage MCs may have through cheaper access to real-time data would be eroded. This is because third parties would be able to access real-time data, at no charge, with any new meter installed from 2028, where they have the customer's consent. In the longer-term, this would ensure MCs are on an equal footing with other potential service providers in terms of access costs.

Any interoperability standards as part of our draft rule would also support competition, as access to real-time data would not be restricted by proprietary software.

In our directions paper we acknowledged that CER devices increasingly have in-built meters with the functionality to provide CER services without the need for smart meters.

We considered that CER providers could couple real-time data from the smart meter with the functionality in the CER device to provide CER services to customers. This service could compete

47 AEMC, directions paper, pp. 44-45.

on a level playing field with any service proposed by MCs or their affiliates using the smart meter to provide the same service.

Stakeholders have raised competition concerns regarding the market for CER services

In bilateral discussions, some stakeholders raised concerns that the regulatory framework enables MCs to control and manage consumers' CER. If secondary meters are classified as a secondary settlement point under the Unlocking CER benefits through flexible trading final rule, MCs may be able to, in effect, exclusively control the secondary meter by preventing third parties from accessing the meter. We have also heard concerns that retailers could switch a customer's CER service provider, primarily for controlled hot water services, without a customer's explicit informed consent.

We have sought further information to substantiate these concerns but as yet, we have not seen any evidence to suggest this scenario is occurring or will occur.

We welcome further information evidencing potential competition issues in the market for metering and CER services

The Commission considers that issues relating to competition in the market for metering and CER services are broader than this rule change.

The regulatory framework should facilitate effective competition, and we will continue to monitor the state of competition in the market.

We welcome information on any material issues related to competition. We remain open to considering arrangements that would better facilitate competitive outcomes as part of a separate review or rule change process.

3 Real-time data would be defined in the NER and further clarified in AEMO procedures

Box 2: Summary

The Commission considers that it is important to have a clear and consistent understanding of real-time data across industry. This would:

- give industry clarity and certainty over any related obligations
- ensure consumers and their appointed representatives have access to a real-time data service that meets the requirements of common customer use cases.

Under our draft electricity rule:

- real-time data would be defined as: Measurements of voltage (in volts), current (in amperes) and phase angle made available by one or more measurement elements in a type 4 or type 4A metering installation at a resolution of no less than once per second in accordance with the requirements of the real-time data procedures.
- by July 2026, AEMO would publish real-time data procedures that would further specify any interoperability standards, security protocols and technical features.

3.1 The NER would define real-time data

Real-time data is not currently defined in the Rules or described in AEMO procedures. Industry has not reached consensus over the meaning of real-time data.

We consider that it is important to define real-time data in the Rules to create a consistent understanding across industry over what real-time data means. A definition would improve clarity and certainty over any obligations related to real-time data.

Our draft determination is to define real-time data as:[48]

> "Measurements of voltage (in volts), current (in amperes) and phase angle made available by one or more *measurement elements* in a type 4 or type 4A *metering installation* at a resolution of no less than once per second in accordance with the requirements of the *real-time data procedures*"

We consider that our definition would ensure that customers and their appointed representatives have access to data that is sufficient to satisfy all use cases.

Real-time data would not be validated data. Access to real-time data would be challenging if the data was required to be validated, because the validation process can take up to two business days to complete.

Table 3.1 explains the key parts of the definition under our draft electricity rule.

48 Amendment to Chapter 10, Schedule 2 of the Draft Electricity Rule.

Table 3.1: Further explanation of the definition of real-time data

Parts of the definition	Further explanation
Measurements of voltage (in volts), current (in amperes)	**Voltage and current** are the primary data points needed to calculate electricity consumption at a customer's premises. The definition does not use these words as defined terms, but relies on the ordinary meaning.
and phase angle	**Phase angle** is the angle of the phase between voltage and current, which can be used to determine: • the active power, i.e. the component of power that is used to do real work (such as light, heat or motion) • the reactive power, i.e. the component of power that is not used to do real work, but is necessary to maintain the electromagnetic fields in the system • the direction of active power flow, i.e. the import or export of electricity • the direction of reactive power flow, i.e. whether voltage and current are leading, lagging, or in phase with each other.
made available	This clarifies that real-time data should be able to be "pulled" from the smart meter, rather than the meter itself needing to "push" data out.
by one or more measurement elements	This clarifies that data from each measurement element in a smart meter may be accessed. The term 'measurement element' is itself defined in Chapter 10 of the NER.
in a type 4 or type 4A	This clarifies that real-time data is only required for a type 4 or 4A smart meter.
metering installation	This clarifies that real-time data can be accessed from devices attached to or around the smart meter.
at a resolution of no less than once per second	This clarifies that data should flow out of the meter every second. This does not mean that the data is received by the customer's device every second. Latency is dealt with by AEMO's procedures.
in accordance with the requirements of the real-time data procedures	In its real-time data procedures to be developed, AEMO would further specify requirements for what real-time data is, including specifically how the data should be made accessible and flow out of the meter.

3.1.1 Our draft determination definition improves clarity over the meaning of real-time data

The rule change request suggested real-time data be defined as data received instantaneously or within 300 seconds.

In the directions paper, we considered that the types of data and delivery timeframe should be more specifically defined.[49]

The directions paper defined real-time data as:[50]

> "voltage, current and phase angle recorded every second and delivered within a second"

We considered that this definition described data that would be sufficient to satisfy all use cases for real-time data.

Stakeholders broadly supported the data values and timeframe specified by the proposed definition.[51]

Intellihub considered the definition should exclude phase angle or enable greater flexibility over how power factor could be expressed.[52] This is because some meters in Intellihub's fleet cannot provide phase angle.[53] We consider the data values specified in the definition remain appropriate. All MCs are already required to provide phase angle to distribution network service providers (DNSPs) as part of their obligations relating to power quality data (PQD) introduced by the Accelerating smart meter deployment rule.[54] The definition of real-time data is consistent with this obligation.

Rheem considered that these data values should be expanded to accumulated, time-stamped energy data and interval data demand records.[55] We consider that these values go beyond real-time data and are not required for the use cases of real-time data discussed in appendix A.

Some stakeholders suggested more information on the technical specifications of real-time data is needed to support security and interoperability.[56] As discussed in section 3.2, we consider that AEMO's real-time data procedures are best placed to further specify communications protocols, data formats and other technical specifications relating to real-time data.

Citipower, Powercor & United Energy suggested that the definition may provide more data than some consumers may want, but supported the future-focused nature of the definition that acknowledges that consumer preferences may change over time and consumers may derive more value from real-time data in the future.[57]

Despite broad support for the definition in the directions paper, our draft determination proposes an amended definition to resolve any ambiguities or unintentional implications.

Stakeholders considered that the definition proposed in the directions paper implied that:[58]

- data would be stored
- data would be required to be delivered to a person who requests access

49 AEMC, Directions paper, p. 21.
50 Ibid, p. 20.
51 Submissions to the directions paper: ECA, p. 7; Endeavour Energy, p. 1; SA Power Networks, pp. 1-2; Justice and Equity Centre, p. 9.
52 Intellihub submission to the directions paper, p. 8.
53 Ibid.
54 AEMC, Accelerating Smart Meter Deployment, Rule determination, 28 November 2024, pp. 21-22.
55 Rheem & CET, submission to the directions paper, p. 16.
56 Submissions to the directions paper: Citipower, Powercor & United Energy, pp 1-2; ECA, p. 7; SA Power Networks, p. 2.
57 Citipower, Powercor & United Energy, Submissions to the directions paper, pp. 1-2.
58 Submissions to the directions paper: Intellihub, pp. 7-8; PluS ES, pp. 6-7.

- data would be required to be delivered within 1 second.

These implications suggest that, if left unchanged, the directions paper definition would not sufficiently clarify obligations related to facilitating access to real-time data. The definition outlined in our draft electricity rule therefore seeks to improve clarity, considering the above implications. Each of these implications, and the way the proposed definition would address it, are discussed below.

3.1.2 Real-time data would not be stored

Stored data is not real-time data because once data is stored it becomes older than 1 second. Third parties would not be able to use stored data as a perfect substitute for real-time data.

To clarify real-time data is not stored, we have not included references to "recorded data".

3.1.3 The MC would not be required to deliver real-time data to the requesting party

Real-time data is not data that is pushed from the meter to some other device or is delivered by another device or software to the data recipient.

Instead, real-time data is data that is made available by the smart meter. This means that real-time data would be pulled from the meter rather than pushed by the meter.

This is an important distinction relevant to the obligations on MCs and retailers to enable access to real-time data, as discussed in chapter 4. It clarifies that MCs and retailers would not be required to deliver or transport data to the requesting party. Instead, they would only be required to ensure that data can be pulled, by the requesting party, from the smart meter.

There is, however, nothing preventing MCs and retailers from adopting an access solution enabling the meter to push data.

3.1.4 Real-time data would not be required to be delivered or received within 1 second

We consider that the directions paper definition presented a lack of clarity over what is required to occur within 1 second.

Our definition in the draft electricity rule would clarify that data must be made available at a resolution of no less than once per second. This means that data should be able to be pulled out of the meter every second.

The time between when the data would be pulled from the meter and received by the requesting party would be specified by AEMO in its procedures. See section 3.2 below.

3.2 AEMO would establish procedures to further specify the definition of real-time data

A definition alone would not provide sufficient clarity and certainty over the meaning of real-time data. There are other technical features of data that are not specified by the definition.

It is important that our draft rule facilitates interoperability, which means that real-time data can be accessed by multiple different types of devices. This limits the risk that real-time data may be only accessed using proprietary devices and instead ensures the technologies that can use real-time data to deliver value for consumers are not limited. While the definition would provide some consistency, real-time data should be further standardised to support interoperability.

It is also important for real-time data access to be secure. This is to mitigate the risks of cybersecurity breaches in relation to information about a consumer's energy use, or breaches that may compromise the integrity of the smart meter.

Our definition would not specify what secure access looks like. To achieve interoperability and cybersecurity, real-time data would need to be accessible and communicated according to some form of interoperability and security standards.

AEMO procedures are relatively more dynamic than the Rules. It is therefore appropriate to include more dynamic elements of real-time data in AEMO procedures. We consider that a definition of real-time data in the Rules, coupled with further information in AEMO's real-time data procedures, would provide sufficient clarity and certainty of the meaning of real-time data and support a flexible approach to developing requirements for interoperability and cybersecurity, which are necessarily dynamic and evolving.

Stakeholders, including AEMO, agreed with the approach proposed in our directions paper.[59] They suggested that interoperability requirements and relevant security protocols should be specified, and considered that AEMO should specify any other technical features of the data.[60]

Our draft determination is therefore to require AEMO to establish, publish and maintain real-time data procedures.[61]

AEMO must develop these procedures and amend any other necessary procedures by 1 July 2026.[62] Based on bi-lateral discussions with AEMO, we consider that this provides AEMO with sufficient time to develop these procedures.

The real-time data procedures must include:[63]

1. procedures for ensuring that real-time data can be accessed securely by devices outside the metering installation
2. minimum requirements for measuring root mean square (RMS) voltage, current and phase angle, including minimum resolution and sampling frequency
3. open standards-based communications protocols that can be used to provide real-time data to end consumers and to real-time data authorised recipients
4. circumstances in which the timeframe for facilitating access specified may be extended
5. any circumstances in which a retailer will not be required to facilitate access to real-time data, including where it is not feasible to make real-time data available at the premises due to circumstances beyond the control of the Metering Coordinator
6. the minimum timeframe for real-time data to be received by an external device, which must be:
    a. a latency of no more than five seconds, or
    b. in circumstances where AEMO considers that a longer latency would be justified, the maximum latency specified in the real-time data procedures.

The real-time data procedures may include:[64]

59 Stakeholder submissions to the directions paper: AEMO, p. 1; ENGIE, p. 4; Bluecurrent, p. 2; Powersensor, p. 8; Tecasa p. 5; CitiPower, Powercor & United Energy, p. 2; Rosetta Analytics, p. 3.

60 Ibid.

61 Clause 7.16.6E(a) of the Draft Electricity Rule.

62 Schedule 3, clause 11.xxx.2 of the Draft Electricity Rule.

63 Clause 7.16.6E(a) of the Draft Electricity Rule.

64 Clause 7.16.6E(b) of the Draft Electricity Rule.

1. minimum security controls for access to real-time data, and
2. a standard format for provision of real-time data.

Stakeholders supported further requirements specified in AEMO procedures. Table 3.2 provides more detail on these requirements and explains how we considered stakeholder views.

Table 3.2: Further detail on elements required to be specified in AEMO procedures

Information that would be included	Explanation
procedures for ensuring that real-time data can be accessed securely by devices outside the metering installation	These procedures would ensure that devices or cloud technology can access real-time data from smart meters without compromising the integrity and security of the smart meter. As discussed in section 4.3.5, MCs would implement their own security measures to meet security requirements under the existing NER requirements and our draft rule. The procedures specified in AEMO's real-time data procedures would be in addition to these measures.
minimum requirements for measuring root mean square (RMS) voltage, current and phase angle, including minimum resolution and sampling frequency	AEMO would specify how many points of the waveform should be measured and the speed of the data signal. Stakeholders sought greater clarity on the specific requirements around how the waveform should be measured.[1]
open standards-based communications protocols that can be used to provide real-time data to consumers and to real-time data authorised recipients	An open standards-based protocol is a communication standard that is easily accessible to most devices and low-cost to implement. These standards ensure greater interoperability because it standardises a common language that most devices understand. CSIP-AUS is widely implemented as an industry standard. However, there could be some variability over how CSIP-AUS is implemented, impacting interoperability. We consider if CSIP-AUS is prescribed as the standard, or if any other standard is adopted, AEMO should provide sufficient guidance to ensure industry applies the standard consistently. Stakeholders supported an open standards-based protocol that is designed to allow as many parties to access data as seamlessly as possible.[2]
circumstances in which the timeframe for facilitating access may be extended	Section 4.1.1 discusses the requirement for customers to get access to real-time data from

Information that would be included	Explanation
	smart meters within 15 business days, and the circumstances where this timeframe can be extended. To provide some flexibility for unknown cases, we consider that AEMO should be able to specify other exceptional circumstances that would reasonably impact the timeframe.
any circumstances in which a retailer will not be required to facilitate access to real-time data	Section 4.1.1 explains that retailers would not be required to facilitate access in certain instances, for example, where issues relating to defects cannot be resolved. Similarly to the timeframe exceptions above, we consider that AEMO should be able to specify other exceptional circumstances in which a retailer will not be required to facilitate access. This aims to address scenarios where it is impossible or infeasible for the MC to arrange for the meter to provide access to real-time data. For example, in apartment units where it may be infeasible to enable wireless access to meters that are far away from the unit. Customers would need to resolve signal strength issues before access may be enabled.
the minimum timeframe for real-time data to be received by an external device	We consider that all solutions that facilitate access to real-time data from the smart meter should enable the data to be received within 5 seconds, all things being equal. However, we consider there may be circumstances, like Wi-Fi connectivity issues, which may affect the time it takes for data to be received.
may include minimum security controls for access to real-time data and a standard format for provision of real-time data	AEMO procedures currently specify how data should be formatted more broadly. We consider that if AEMO considers it applicable, AEMO could specify a format in which real-time data should be communicated. However, as explained in section 4.1.7, real-time data is not translated into energy consumption data. It is raw data values. A specified data format would not relate to how data would be presented as energy consumption data or any other form other than the raw values specified by our draft rule definition. AEMO may also consider that it is appropriate to include additional security protocols in addition to other security procedures which must be specified by AEMO and security

Information that would be included	Explanation
	measures implemented by MCs.

Source: [1]SwichDin submission to the directions paper, p. 5, [2]SA Power Networks submission to the directions paper, p. 2.

Interoperability challenges are broader than the interaction between the smart meter and other devices. The Commission acknowledges that multiple work programs are seeking to achieve greater interoperability across distributed energy resources (DER) and CER devices. We encourage AEMO to engage broadly with technology innovators when developing these procedures and consider broader work on interoperability, including work progressed by the DEIP Interoperability Steering Committee.

We acknowledge that timely implementation of interoperability standards is challenging and recognise stakeholder concerns that this may slow the implementation of our draft rule.[65] We consider that AEMO procedures are relatively dynamic and can give effect to continuously evolving standards. This means that AEMO would not need to delay the publication of real-time data procedures to give effect to any standards yet to be determined.

The Commission considers that there may be tradeoffs between interoperability and cybersecurity. We consider that this should not mean that interoperability should be limited. Instead, AEMO and industry should consider more innovative approaches to achieving interoperability without materially compromising cybersecurity.

We acknowledge that cybersecurity is a broader challenge with the increasing adoption of smart technology, but these risks should not limit the value that this technology can deliver to consumers. We consider that our draft rule includes sufficient cybersecurity protections as part the requirements for AEMO to develop real-time data procedures and obligations on MCs to enable secure access to real-time data.

Question 7: We proposed a definition of real-time data and a requirement 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?

65 Landis + Gyr, submission to the directions paper, p. 4.

4 Retailers and metering coordinators would facilitate access to real-time data

Box 3: Summary

We consider that any real-time data framework should facilitate simple access to achieve a positive customer experience. Our draft rule would support this by leveraging existing retailer and MC relationships and responsibilities to facilitate access to real-time data.

Retailers, as the main parties with which customers have a relationship, would facilitate access to real-time data by managing the relationships with customers and MCs. Under our draft rule:

- small customers would request their retailer to facilitate access to real-time data from the smart meter
- customer appointed representatives would also be able to request the customer's retailer to access real-time data from the smart meter
  - third parties would be required to have a customer's consent
  - third parties that are not registered participants would be required to be accredited by AEMO
- retailers must facilitate access within 15 business days, unless there are exceptional circumstances
- retailers would be required to revoke access in certain circumstances
- retailers must treat real-time data as 'affected customer information' for the purposes of family violence and so must not disclose real-time data without the consent of an affected customer.

MCs would facilitate access to real-time data by ensuring real-time data is accessible from the smart meter. Under our draft rule MCs would:

- facilitate access to real-time data in accordance with a retailer's request
- ensure real-time data is accessible from smart meters in accordance with the requirements of AEMO's real-time data procedures
- ensure real-time data is protected from unauthorised access
- provide information to a retailer upon request where it is needed to resolve disputes managed by the energy ombudsman.

4.1 We propose requiring retailers to facilitate access to real-time data

Our draft determination seeks to support a good customer experience for consumers accessing real-time data from the smart meter.

A small customer's retailer is the most appropriate party to facilitate access to real-time data. This is because customers have an existing relationship with retailers to manage the provision of electricity and metering services.

Our draft determination is to require retailers to facilitate access to real-time data upon a customer's request.[66]

66 Division 9B, rule 59E(2) of the Draft Retail Rule.

The Commission considers that retailers should facilitate access to real-time data from smart meters in a way that delivers good customer experiences.

Our directions paper sought stakeholder feedback on whether customers should request access from retailers or MCs.[67]

Stakeholders considered retailers would be best placed to facilitate access because of the retailer's existing relationships with their customers.[68]

4.1.1 Retailers would facilitate access to real-time data within 15 business days after resolving any exceptional circumstances

Consumers and third parties should be able to access real-time data as soon as practicable once a request is made. This is an important part of achieving a good customer experience and enables customers to derive value from real-time data in a timely way.

Our draft determination is to require retailers to facilitate access to real-time data within 15 business days.[69]

Under our draft rule, there is a different process for consumers with meters installed after 2028 and consumers with meters installed before 2028. This is because consumers with meters installed before 2028 may need to pay to access real-time data from smart meters. This is discussed in detail in section 2.4.

Under our draft rule:

- If customers are not required to pay for access, then retailers must facilitate access within 15 business days of the request being made.[70]
- If customers are required to pay for access, then retailers must facilitate access within 15 business days of the request being made, or after the customer agrees to pay the charge, whichever is later.[71]

We consider 15 business days is sufficient time for retailers and MCs to coordinate to facilitate a customer's access to real-time data from the smart meter. Retailers manage the process for their customers' access to real-time data, but MCs are responsible for the meter, and therefore, in practice it is MCs who would complete any necessary practical steps to facilitate a customer's access. The role of the MC in this process is discussed in section 4.1.2 and further in section 4.3.

There are circumstances where the 15 business day timeframe may be extended

Stakeholders suggested that there may be reasonable circumstances where the timeframe for providing access should be extended.[72] We agree that there are reasonable circumstances where retailers may be unable to facilitate access within 15 business days.

Our draft determination is to extend the timeframe within which retailers are required to facilitate access to real-time data by the time it takes to resolve the following:[73]

- retrofitting or replacing the meter

67 AEMC, directions paper, pp. 32-35.

68 Submissions to the directions paper: ECA, p. 7; Energy and Water Ombudsman joint submission to the directions paper, p. 5; Tecasa, p. 6; Bluecurrent p. 7;ENGIE, p. 3; Powersensor, p. 9; CEC, p. 4; Alinta, pp. 4-5; Origin, p. 2.

69 Division 9B, rule 59E(5) of the Draft Retail Rule.

70 Division 9B, rule 59E(5)(a) of the Draft Retail Rule.

71 Division 9B, rule 59E(5)(b) of the Draft Retail Rule.

72 Submissions to the directions paper: Bluecurrent, p.5; Ausnet, p.1; Intellihub, p.9.

73 Division 9B, rule 59E(6) of the Draft Retail Rule.

- a defect in the metering installation
- any time taken to verify the customer's consent
- any circumstances specified in AEMO's real-time data procedures.

Stakeholders suggested that our draft rule should be consistent with existing exceptions relating to metering installations including the improvements made by the Accelerating smart meter deployment rule.[74] For example, that rule improved and clarified the process to resolve metering installation defects, and requirements where there are shared fusing arrangements.[75] The draft rule accounts for these exceptions by enabling retailers to extend the 15 business day timeframe in line with these circumstances, thereby achieving consistency with these new and improved arrangements for meter replacements.[76]

For further consistency, our draft rule would not require a retailer to facilitate access if a customer does not want to resolve the defect in the metering installation, or if the defect cannot be resolved.[77]

The draft rule also enables AEMO to specify circumstances in which retailers are not required to facilitate access to real-time data in the real-time data procedures.[78] This is discussed further in section 3.2.

Our directions paper proposed two separate timeframes for retailers to facilitate access to real-time data based on whether changes were needed to the metering installation.[79] For simplicity, we consider there should be a single timeframe - of 15 business days - that could then be extended by the time it takes resolve any exceptional circumstances, in line with the timeframe specified for the relevant circumstance in the Rules.

Retailers must keep customers updated on the progress of their access request

Under our draft rule, retailers would be required to notify customers within 10 business days if it would take longer than 15 business days to facilitate access to real-time data, or if access cannot be facilitated for one of the reasons permitted by the draft rule.[80]

This keeps the customer informed of the progress of their access request and ensures that they have visibility over any delays to the time it will take for real-time data access to be enabled at their premises.

4.1.2 In practice, retailers would direct MCs to facilitate access to real-time data

Retailers would not directly interact with the metering installation to facilitate access to real-time data. Retailers have a contractual relationship with MCs for metering services.[81] In practice, a retailer would facilitate access to real-time data by arranging for the MC to do so in accordance with the terms of their contract, which would need to be consistent with our draft rule.

74 Submissions to the directions paper: Energy Queensland, p. 8; EnergyAustralia, p. 8.

75 See clauses 7.8.10A, 7.8.10B, 7.8.10C and 7.8.10D of the NER, and rule 59AAA of the NERR, which have been variously amended and inserted by the *National Electricity Amendment (Accelerating smart meter deployment Rule) 2024 No.20* and the *National Energy Retail Amendment (Accelerating smart meter deployment) Rule No.6* from 1 December 2025.

76 See Division 9B, rule 59E(6)(a) of the Draft Retail Rule.

77 Division 9B, rule 59E(7)(a) of the Draft Retail Rule.

78 Division 9B, rule 59E(6)(d) of the Draft Retail Rule.

79 AEMC, directions paper, p. 22.

80 Division 9B, rule 59E(8) of the Draft Retail Rule.

81 See clause 7.6.1 of the NER.

Under our draft rule, when a retailer requests an MC to facilitate access, the retailer must inform the MC of:[82]

- the NMI and address of the customer's premises; and
- the contact details of the person who requested access.

This information is necessary for the MC to identify the smart meter from which real-time data would need to be accessible. It would also give the MC the option to directly communicate with the customer appointed representative.[83]

Section 4.3 discusses how MCs would facilitate access under the draft rule.

4.1.3 Retailers must inform customers how to access real-time data once access is facilitated

Under our draft retail rule, retailers must inform customers or their appointed representative when the request has been completed and provide information about how to access real-time data.[84]

Under our draft rule, MCs have the flexibility to offer a range of solutions to enable access to real-time data. It is possible that some solutions may require customers or their appointed representative to actively connect devices to the smart meter to access real-time data. For example, a customer device may need a password from the MC to connect to the meter over Wi-Fi. We consider that customers, or their appointed representatives, need to be sufficiently informed about how to access real-time data.

We encourage retailers to make information about real-time data more broadly available on their websites to support customers considering whether to request access to real-time data from smart meters.

Retailers do not need to inform consumers when real-time data is accessible if a customer does not request access

The Commission encourages retailers to provide customers with information, through their websites or other communication methods, about how they can access real-time data from the smart meter.

Our draft rule does not, however, place an obligation on retailers to proactively inform customers about the availability of real-time data.

We expect that most requests for real-time data access would be managed by a third-party service provider or retailer, on behalf of the customer. This is consistent with current practice, where it is generally a service provider that would seek to implement real-time data access to enable a customer service offering, such as a CER installation. We consider that it would be in these parties' commercial interest to inform customers about the availability of real-time data from the smart meter, and that an obligation on retailers to proactively inform customers may not be productive.

The draft electricity rule includes a provision that requires MCs to inform retailers, following a request to facilitate real-time data access, whether the customer's meter meets the new min specs.[85] We seek stakeholder feedback about whether more information should be provided by MCs and retailers to help customers identify whether they have a meter with new min specs, and if so, how this might be achieved.

82 Division 9B, rule 59E(9) of the Draft Retail Rule.
83 The 'appointed representative' is called the real-time data authorised recipient in the Draft Retail Rule and Draft Electricity Rule.
84 Division 9B, rule 59E(10) of the Draft Retail Rule.
85 Clause 7.15.7(d)(1) of the Draft Electricity Rule.

4.1.4 Customers could switch retailers without affecting their access to real-time data

Stakeholders consider that the regulatory framework should support customers switching retailers.[86] The Commission agrees that customers should be able to easily change to a different retailer.

Under our draft rule, if a customer who is accessing real-time data from the smart meter at their premises changes retailer, but remains at the same premises:[87]

- the outgoing retailer must inform the incoming retailer that real-time data access has been provided to the customer
- the incoming retailer must continue to provide access to real-time data at the small customer's premises at no charge.

This means that accessing real-time data from smart meters would not be a barrier to changing retailers. If a customer changes retailer, access to real-time data would continue, without any action required from the customer.

As discussed in the next section, access to real-time data is ongoing for customers and their appointed representatives until access is revoked.

4.1.5 Retailers would revoke access in certain circumstances

As discussed in section 4.2.1, only parties with a customer's consent would be able to access that customer's real-time data. Over time, it may be difficult for retailers to continuously monitor whether customers still want real-time data to be accessible to service providers.

For example, stakeholders noted that when a customer moves premises, the new occupant may not want data to be accessible from the smart meter.[88] To help minimise the burden of managing access to real-time data, we consider that retailers should be required to automatically revoke access to real-time data in certain circumstances.

Our draft retail rule would require retailers to revoke access to real-time data where the customer:[89]

- requests that access be revoked; or
- vacates the premises.

How a retailer would revoke access would be determined by the retailer and the MC, but the Commission expects that this could potentially leverage existing B2B or CDR processes. This process could also vary based on how appointed representatives access real-time data from the smart meter. To provide flexibility, the draft rule does not prescribe how this should occur.

4.1.6 Retailers would seek consent of customers affected by family violence before facilitating access to real-time data

The NERR defines affected customers as any customer, including a former customer of a retailer, who is or was a small customer and who may be affected by family violence.[90]

We acknowledge that data could potentially be misused to perpetrate family violence and financial abuse, as it contains personal and sensitive information about the customer's behaviour.

86 Teasa, submission to the directions paper, pp. 4-5.
87 Division 9B, rule 59E(11) of the Draft Retail Rule.
88 Submissions to the directions paper: Red Energy & Lumo Energy, p. 2; Energy Queensland, p. 7; Energy Australia, p. 6.
89 Division 9B, rule 59E(12) of the Draft Retail Rule.
90 Definition of 'affected customer' in rule 3 of the NERR.

To help protect the data of customers who may experience family violence, the NERR includes protections for affected customers. Stakeholders recommended extending these protections to real-time data.[91]

Our draft determination is to classify real-time data as affected customer information for the purposes of rule 76G of the NERR.[92] Affected customer information refers to any information that may be used to identify, communicate with or locate an affected customer, including information about their whereabouts, contact details, or financial or personal circumstances.[93]

This means that a retailer would be prevented from disclosing or providing access to real-time data of an affected customer to any other person without the consent of the affected customer.[94] The draft retail rule also deems real-time data authorised recipients to be 'any other person' for the purposes of these provisions.[95] Therefore, in practice, a retailer may refuse a request to facilitate access to real-time data to protect a customer affected by family violence.

4.1.7 Retailers are not required to translate real-time data from raw data values

As discussed in chapter 3, the definition of real-time data introduced by the draft electricity rule clarifies that the data is raw, unvalidated data values.[96] It is not energy consumption data presented in a particular way.

Raw real-time data itself is not valuable for consumers. It is services using real-time data that can be beneficial to consumers, including CER management services or mobile application services.

Under the draft rule, the extent of the obligations on retailers to facilitate access to real-time data end once the MC makes the real-time data accessible from the smart meter and the retailer confirms completion of the request with the customer.[97] How real-time data is actually delivered and presented to the customer is the responsibility of the customer, or their appointed representative. In practice, the Commission expects that most customers will seek access to real-time data through an appointed representative,[98] who will arrange the access as part of a broader CER service. This is discussed further in section 4.2.

In response to our directions paper, some stakeholders proposed that the onus should be placed on retailers to ensure that consumers will be able to understand the real-time data that is being made available to them.[99]

We do not consider that retailers should incur the cost of devices to access real-time data from smart meters or the cost of translating and presenting this data to customers.

We consider that customer appointed representatives, including CER service providers,[100] would likely have devices and other technologies that retrieve and read the real-time data from the smart meter and translate this data into a format or purpose that is meaningful for the customer and their particular use case. This data could be presented through web portals, mobile applications, or in-home displays. As discussed in section 4.2 below, in most cases, the real-time data itself

91 Stakeholder submissions to the directions paper: AER, p.5; Red Energy & Lumo Energy, p. 7, Australian Energy Council, p. 3; Powershop, p. 4.
92 Division 9B, rule 59E(13)(a) of the Draft Retail Rule.
93 Rule 76G of the NERR.
94 See rule 76G(1) of the NERR.
95 Division 9B, rule 59E(13)(b) of the Draft Retail Rule.
96 See definition of 'real-time data' introduced into Chapter 10 by Schedule 2 of the Draft Electricity Rule.
97 The notification requirement is in rule 59E(10) of the Draft Retail Rule.
98 A 'real-time data authorised recipient' under the draft rule.
99 Submissions to the directions paper, AER, p.3; Engie, p.4.
100 Who would need to be accredited as 'real-time data authorised recipients' under clause 7.4.5 of the Draft Electricity Rule.

may not even be presented to the customer but be used as part of the provision of a broader service. This is consistent with current practice.

We consider that our draft rule would facilitate a competitive market where third parties can offer services to access real-time data from smart meters and translate that data into a meaningful format or purpose that is of value to customers. Our draft rule would also not prevent retailers from integrating real-time data into their existing data offerings for customers.

Question 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?

4.2 Retailers would facilitate access for customer appointed representatives

Raw real-time data is not valuable for consumers without some further transformation, use, or presentation. It is therefore important for service providers, which could be retailers or third-party service providers, to be able to access real-time data from smart meters so that they can offer services that customers value. In most cases, we consider that service providers would access real-time data to deliver value for customers instead of customers accessing real-time data themselves.

However, only service providers that are appointed by customers should be able to access real-time data. This mitigates the risk that real-time data is accessed and shared without a customer's consent.

Our draft determination is to require any party who wishes to access a customer's real-time data to become a 'real-time data authorised recipient'. A real-time data authorised recipient is any person that has obtained a customer's consent to access real-time data and is:[101]

- a registered participant (this includes retailers, DNSPs and MCs)
- AER, AEMO, or a jurisdictional regulator
- a person accredited by AEMO (these would be third-party service providers who are not registered participants).

A retailer may only facilitate access to real-time data for its customer, or a real-time data authorised recipient in respect of that customer.[102] The requirements for consent are discussed in section 4.2.1.

The process described in section 4.1 also applies to real-time data authorised recipients in that:

- real-time data authorised recipients must request retailers to facilitate access to real-time data[103]
- retailers must facilitate access to real-time data for real-time data authorised recipients within 15 business days (or within the permitted timeframe for an extension to resolve any exceptional circumstances)[104]

101 Division 9B, rule 59D(2) of the Draft Retail Rule.
102 Division 9B, rules 59D(1) and 59E(1) and (2) of the Draft Retail Rule.
103 Division 9B, rule 59E(1) of the Draft Retail Rule.
104 Division 9B, rule 59E(5) of the Draft Retail Rule.

- retailers must inform real-time data authorised recipients when the request has been completed and how to access real-time data.[105]
- real-time data authorised recipients may be charged to access real-time data where charges are permitted.[106] Whether the real-time data authorised recipient pays the charge, or the customer pays the charge, would be agreed between those parties - the customer could choose to directly pay their retailer,[107] or the real-time data authorised recipient could agree to pay the retailer on behalf of the customer.[108] The costs to access real-time data are discussed in section 2.4.
- retailers must revoke access to real-time data by real-time data authorised recipients if the customer requests the access to be revoked.[109]

Throughout this determination we have referred to real-time data authorised recipients as customer appointed representatives. The rest of this section clarifies how customer appointed representatives access real-time data. That is, they become real-time data authorised recipients.

4.2.1 Customer appointed representatives would need the customer's consent to access real-time data

The Commission considers that customers should have control over who has access to the real-time data from a smart meter installed at their premises.

Our draft determination is to require any person who wants access to a customer's real-time data to, first, obtain that customer's consent.[110]

Consent may take many forms. We are aware of the risk that parties may not provide sufficient information for customers to have a good understanding of what they are consenting to, and why.

Our draft rule would place a set of requirements on parties seeking customer consent to access real-time data. In seeking customer consent, parties must:[111]

- specify the energy service for which real-time data would be used - this is so customers know how real-time data would be used to deliver value for them
- specify any charges that may be payable by the customer - this is so customers do not pay any hidden costs. These charges could include the appointed representative's costs and should also alert the customer to the potential for a real-time data facilitation charge to apply[112]
- present the customer with an active choice to give consent, which would not be the result of default settings or pre-selected options - this is so customers do not unknowingly provide consent, and are actively aware that they have provided their consent
- present the customer with information on how to revoke access to real-time data - this is so customers have ongoing control of who has access to data about them.

We consider these requirements are necessary to ensure that third parties provide adequate information to customers before the customer consents, so that the customer can make an informed decision.

105 Division 9B, rule 59E(10) of the Draft Retail Rule.
106 Division 9B, rules 59E(2) and (3) and 59F of the Draft Retail Rule.
107 Division 9B, rules 59E(5)(b) and 59F(2), (3) and (4) of the Draft Retail Rule.
108 For example, payment by the real-time data authorised recipient under rule 59E(5)(b) of the Draft Retail Rule.
109 Division 9B, rule 59E(12) of the Draft Retail Rule.
110 Division 9B, rules 59D(1) and (2) of the Draft Retail Rule.
111 Division 9B, rule 59D(3) of the Draft Retail Rule.
112 Division 9B, rules 59E(3) and 59F of the Draft Retail Rule.

In submissions to the directions paper, stakeholders supported minimum requirements on how third parties request access to real-time data.[113] Some stakeholders also suggested that additional guidance in the Rules around how consent should be obtained would provide greater clarity over what constitutes consent and ensure a consistent minimum standard is applied.[114]

However, in contrast, other stakeholders raised concerns that there is a risk with requiring parties to complete a standard form of consent because this would reduce flexibility and be potentially incompatible with existing processes.[115] We agree this is a risk and consider flexibility is important. Therefore, our draft rule does not require a standardised form of consent, for example. We consider that the minimum requirements for consent imposed by our draft rule would not reduce flexibility, as the way these requirements are presented to, and confirmed by, the customer is not prescribed.

These consent requirements are fairly consistent with the Consumer Data Right (CDR) for accredited data recipients that are relevant to real-time data access. We did not include other consent requirements from the CDR because these were not relevant to accessing real-time data. We discuss the CDR in further detail in section 4.2.5.

Retailers also have obligations under the *Privacy Act 1998 (Cth)*, which include obligations around the collection, use, and disclosure of personal information. To the extent that real-time data is personal information, it will need to be treated as such by retailers. A retailer may need to verify that a customer appointed representative has received their customer's consent to facilitate access to real-time data. However, the draft rule does not require retailers to verify consent, and does not prescribe any form of verification, because the Commission considers the assessment of consent and any process to verify it is best managed by retailers in accordance with their existing compliance processes. However, given the inherent uncertainty with this process, the draft retail rule allows the 15 business day timeframe for facilitating access to real-time data to be extended by any time required for the retailer to verify the customer's consent. After a retailer has verified consent, it would facilitate access to real-time data within 15 business days, as discussed in section 4.1.1.[116]

All registered participants would have access to real-time data subject to customer consent

Stakeholders considered that registered participants, such as retailers and DNSPs, could use real-time data to deliver value to customers.[117] [118]

Stakeholders suggested that, given these parties already access data related to their customers without their customers' explicit consent, they should also be able to access real-time data without a customer's consent.[119]

The Commission agrees that registered participants should be able to access real-time data from smart meters at no charge to deliver value for consumers. Our draft rule would enable registered participants to pull real-time data from smart meters at no charge, if the meter is installed from 2028 or if a charge has already been paid to make real-time data accessible from the smart meter.

113 Stakeholder submissions to the directions paper: AEMO, p. 1; ECA, p. 8; AER, p. 5.

114 Stakeholder submissions to the directions paper: Energy Consumers Australia, p. 8; Energy Queensland, pp. 9-10; ENGIE, p.3; PowerSensor p.9-10, SMA Australia, p. 4; CitiPower, Powercor & United Energy, p. 3; SwitchDin, p. 10.

115 Stakeholder submissions to the directions paper: Ausnet, p. 6; Red Energy & Lumo Energy, p. 5.

116 Division 9B, rule 59E(6)(c) of the Draft Retail Rule.

117 There may also be value for AEMO and the AER to access real-time data and these parties may also be 'real-time authorised recipients' - see rule 59D(2)(b).

118 Stakeholder submissions to the directions paper: TasNetworks, p. 1; Energy Queensland, p. 6; SA Power Networks, pp. 2-4.

119 Submissions to the directions paper Ausnet p. 7; Avionix Inc, p. 5; Endeavour Energy, p. 1.

However, we consider that registered participants should seek customer consent to do so. Unlike accessing other forms of data, accessing real-time data may impact a customer's infrastructure, such as their Wi-Fi network. Therefore, we consider that customers should provide consent in respect of any services that may impact their infrastructure.

4.2.2 Some customer appointed representatives would be accredited by AEMO

The NER places several obligations on registered participants and other accredited parties to ensure that they appropriately manage data, including energy and metering data. However, these obligations do not extend to parties that are not registered participants or accredited. For example, MCs are registered participants,[120] and metering providers (MPs) and metering data providers (MDPs) are accredited by AEMO.[121]

This creates the risk that parties who request access to real-time data may not be appropriately equipped to handle the data.

To become a real-time data authorised recipient, our draft determination is to require all parties, who are not already registered participants,[122] to be accredited by AEMO, in addition to obtaining the customer's consent.[123] This would mean MDPs and MPs, who are not registered participants, would need to be accredited under clause 7.4.5 of the draft rule. This would therefore be in addition to their existing accreditation under the NER. We do not consider that it is likely that MDPs and MPs would require ongoing access to real-time data to provide services to customers. Data that MDPs and MPs currently have access to may be sufficient to perform their existing responsibilities. If MDPs and MPs want access to real-time data to provide other services, we consider that it is unlikely that the AEMO accreditation process would be onerous on these parties. AEMO could already be satisfied that these parties would meet the accreditation criteria.

Under our draft electricity rule, AEMO would only accredit parties where AEMO is satisfied that the party applying to be accredited:[124]

- is a fit and proper person to handle real-time data in accordance with the Rules; and
- will take steps to adequately protect real-time data from misuse, interference, loss, unauthorised access, modification or disclosure.

AEMO must publish guidelines in respect of the accreditation process and requirements by 1 November 2026.[125]

We do not consider that parties should have to wait for any final rule to commence on 1 January 2028 to become accredited. This would delay the benefits of real-time data until parties are accredited. Therefore, our draft electricity rule would enable parties to apply to AEMO for accreditation as a real-time data authorised recipient from 1 November 2026.[126] However, if an accreditation is granted, it would only take effect from 1 January 2028.[127]

120 Under Chapter 2 of the NER.
121 Under Chapter 7 of the NER.
122 Or are not the AER, AEMO or a jurisdictional regulator.
123 Division 9B, rule 59D(2)(c) of the Draft Retail Rule.
124 Clause 7.4.5(d) of the Draft Electricity Rule.
125 Clause 7.4.5(b) and transitional provision in Schedule 3, clause 11.xxx.2, of the Draft Electricity Rule.
126 Transitional provision in Schedule 2, clause 11.xxx.3(a) of the Draft Electricity Rule.
127 Transitional provision, clause 11.xxx.3(c) of the Draft Electricity Rule.

In submissions to the directions paper, stakeholders considered that existing privacy and cybersecurity legislation is insufficient to ensure parties who are not registered participants would be able to adequately protect and manage real-time data.[128] [129]

Stakeholders considered that, at a minimum, some level of accreditation should be required to access energy data.[130] Some stakeholders also considered that it may be appropriate to apply CDR accreditation standards.[131]

However, other stakeholders expressed that an accreditation scheme would create a barrier to access real-time data and discourage parties from accessing real-time data from smart meters, which could lower the benefits of any rule.[132]

The Commission considers that, on balance, it is important to mitigate the risk that parties accessing real-time data are unable to adequately protect it. We do not consider that accreditation would discourage the take-up of real-time data from smart meters. Instead, we consider that accreditation would improve social licence and customer confidence, and therefore, our draft determination is to require accreditation.

4.2.3 Customer appointed representatives would keep real-time data confidential

Our draft rule specifies that real-time data is confidential information.[133] Under the NER, registered participants (and other parties deemed to be registered participants for this purpose) must use all reasonable endeavours to keep confidential any confidential information that they are aware of or comes into their possession or control.[134]

However, as discussed in section 4.2.2, although customer appointed representatives are accredited by AEMO, they are not registered participants. For the purposes of the confidentiality requirements of the Rules only, our draft determination is to treat real-time data authorised recipients as registered participants.[135]

This would ensure that real-time data would be treated as confidential information by real-time data authorised recipients in accordance with the requirements of the NER. This would be consistent with the arrangements for MPs and MDPs, who are deemed to be registered participants for this purpose.[136]

This means that customer appointed representatives that have access to real-time data would be required to satisfy all requirements under Chapter 8 Part C of the NER including:

- not sharing or reproducing real-time data for purposes not permitted by the Rules
- using all reasonable endeavours preventing unauthorised access to real-time data from their devices or systems.

In addition to AEMO accreditation, and customer consent requirements, this would mitigate the risk that information about a customer's data use is appropriately protected.

128 Obligations under the *Privacy Act 1988* could provide some obligations around the sharing of real-time data to the extent it is personal information. However, the *Privacy Act 1988* only applies to persons with an annual turnover of over $3 million. The *Cyber Security Act 2024* placed some security requirements on CER devices manufactured from 2025.

129 Submissions to the directions paper: AER, p. 6; AEC, p. 3.

130 Submissions to the directions paper: AEMO, pp.1-2; Clean Energy Council, p. 5; AGL, p. 6; Alinta, pp. 5-6; Origin, p. 2; Energy Australia, p. 7.

131 Submissions to the directions paper: Energy Consumers Australia, p.8; Tecasa, p.7; ENGIE, p.2-3.

132 Submissions to the directions paper: AusNet, p. 7; SenseLabs, p. 7.

133 Clause 7.15.1(a) of the Draft Electricity Rule.

134 Clause 8.6.1(a) of the NER.

135 Amendment to clause 8.6.1A, Schedule 2, of the Draft Electricity Rule.

136 See clause 8.6.1A of the NER.

4.2.4 Customer appointed representatives have multiple pathways to access real-time data

Table 4.1 describes the multiple pathways appointed representatives could access real-time data.

Table 4.1: Pathways to access real-time data

Pathway	Description
1. Directly from a smart meter	A party must become a real-time data authorised recipient before requesting access to real-time data from a customer's retailer.
2. Using alternative devices	Consistent with the status quo, a third party could install a device near the meter to access real-time data.
3. Directly from a customer	It may be possible for customers to directly share real-time data that they access from the smart meter with other parties. This would require third-party software to access real-time data from smart meters in a way that enables customers to share data. Parties would not be required to become real-time data authorised recipients if a customer shares real-time data directly with them.

4.2.5 Our draft rule would not duplicate the CDR

It is not within the AEMC's jurisdiction to make changes to the CDR framework. Therefore, the Commission's draft determination is to reflect relevant elements of the CDR in our draft rule, instead of amending the CDR framework. This promotes consistency between the CDR and our draft rule.

We consider that our draft rule would not duplicate the CDR. Our draft rule specifically deals with the unique circumstances of facilitating access to real-time data directly from smart meters. This is different to the data sets under the CDR, which cover data received at a later frequency and that is verified and reconciled by market settlement processes.[137] Because of the material differences between the type of data, many of the CDR requirements are not directly relevant in the context of real-time data and should not be reflected in our draft rule.

Under the CDR, designated data holders can share specified classes of information with accredited third parties that have a consumer's consent to access this information.[138] AEMO and retailers are designated data holders, and can share CDR data with consumers and accredited third parties.

This means that under the CDR, a third party that is an accredited data recipient can seek a consumer's consent to access their energy data. If a consumer provides third parties with consent, AEMO and retailers can share the data from their databases with the third party. The CDR gives consumers more control over their data and enables consumers to share data with accredited third parties using secure automated data technology.

There are also circumstances where unaccredited third parties can access data, for example as a CDR representative who has a written contract in place with a customer.[139]

137 CDR data includes metering data, NMI standing data and DER register information.

138 Section 12 of the Energy Designation Instrument sets out the 'specified data holders', which are the persons who hold the 'specified classes of information' in sections 7 to 10.

139 See more here.

Real-time data, as would be defined by our draft rule, is not a specified class of information that could be shared with third parties under the CDR. This means that the CDR framework would need to be amended to apply to real-time data.

To apply to real-time data, the CDR framework would need to be amended to include MCs as designated data holders and expand the specified classes of information. These changes are significant, requiring the reopening of the CDR designation instrument for the energy sector for a sectoral assessment of regulatory impacts and costs. It would involve significant consequential reforms to the CDR Rules and the Data Standards.

4.3 We propose requiring MCs to facilitate access to real-time data from smart meters

Enabling access to real-time data would involve changes to the physical metering infrastructure at a customer's premises or engaging with a meter's software and communications technology. Retailers do not directly engage with any metering infrastructure at a consumer's premises, nor do they have any remote control of the meter. This means that retailers cannot enable access to real-time data from smart meters without the help of an MC.

4.3.1 MCs would facilitate ongoing access to real-time data from smart meters upon a retailer's request

Our draft determination is to require MCs to facilitate access to real-time data for small customer metering installations.[140] MCs would facilitate access following a retailer's request.[141] This means that an MC would only facilitate access to real-time data when they are directed to do so by the retailer. No other party could direct an MC to facilitate access to real-time data from a smart meter.

MCs must facilitate ongoing access to real-time data and, as discussed in section 2.4, may only charge retailers to facilitate access from meters installed before 1 January 2028 and do not meet the new min specs.[142]

Currently, retailers contract with MCs for services related to the metering installation at a customer's premises.[143] The MC then appoints MPs and MDPs to provide metering services.

The Commission considers that it is important to include an explicit obligation on MCs to facilitate access to real-time data from the smart meter. This sets a clear expectation that facilitating access to real-time data should be regarded as a standard metering service. Treating real-time data access as a standard metering service means that customers and appointed representatives would not have to commercially negotiate with MCs to access real-time data. As explained in appendix A.4, the existing commercial negotiation process is a barrier to accessing real-time data from smart meters.

An explicit obligation would also clarify that the terms and conditions commercially agreed between the MC and the retailer who appoints the MC should cover services in respect of facilitating access to real-time data. We consider that no party, other than the MC, could more appropriately perform this role under existing market design arrangements.

Stakeholders supported an explicit requirement on MCs to facilitate access to real-time data.[144]

140 Clauses 7.3.2(r) and 7.15.7 of the Draft Electricity Rule.
141 Clause 7.15.7(b) of the Draft Electricity Rule.
142 Clause 7.15.7(e) and (f) of the Draft Electricity Rule.
143 Clauses 7.6.1 and 7.6.2(a)(3)(i) of the NER.
144 Submissions to the directions paper, SMA Australia, p. 10; SenseLabs, p. 7; SwitchDin, pp. 7-8.

4.3.2 MCs would facilitate access according to the requirements specified in the real-time data procedures

In submissions to the directions paper, MCs considered that it was unclear, from the proposed approach in the directions paper, the extent to which MCs would facilitate access to real-time data from smart meters.[145]

Our draft determination requires MCs to facilitate access to real-time data in accordance with the requirements in the draft electricity rule and in AEMO's real-time data procedures.[146]

We consider that the definition of real-time data and the additional requirements that would be included in AEMO's real-time data procedures, discussed in Chapter 3, would clarify how MCs facilitate access to real-time data. We intend that the definition of real-time data, as well as the requirements in AEMO procedures, would clarify that MCs are not required to store, validate, translate, or deliver real-time data. We welcome stakeholder feedback on whether the proposed definition and AEMO procedures offer sufficient clarity in this respect.

The definition of real-time data and requirements to be specified in the real-time data procedures would clarify that the MCs is not responsible for issues beyond the meter. Once real-time data is made available from the smart meter, such that another device can connect to an ongoing stream of real-time data, either wirelessly or through a wired connection, MCs would be considered to have facilitated access to real-time data under our draft rule.

How real-time data is delivered from the smart meter to a customer, or its appointed representative, is not the responsibility of the MC. MCs are not responsible for supplying devices to extract, receive, or translate data. However, our draft rule would not prevent MCs from offering these devices to facilitate access to real-time data as a potential solution for customers who do not have meters with the new min specs. As Intellihub suggested, they could provide a wireless device that communicates with the smart meter and acts as a medium between the smart meter and a customer device.[147]

AEMO's real-time data procedures would also specify that MCs are not responsible for increases in latency to receive data that may be caused by devices other than the smart meter. Whilst any access solution that the MC develops must be capable of enabling real-time data to be received within 5 seconds, the real-time data procedures may specify circumstances where the latency maybe longer, for example, due to factors outside the MCs control, such as Wi-Fi connectivity issues.[148]

4.3.3 MCs would also facilitate access according to additional requirements in the NER

The real-time data procedures would specify requirements that are more dynamic and should be able to change over time. Many of the technical requirements for real-time data, for example, would be specified in AEMO's real-time data procedures.[149] In contrast, the Rules would specify requirements less subject to periodical change. For this reason, many of the technical requirements for real-time data would be specified in AEMO's real-time data procedures.[150] However, in addition to the definition of real-time data itself, the draft electricity rule would also specify certain requirements in the Rules.

145 Submissions to the directions paper: Intellihub; p. 7, Bluecurrent, p. 4, PlusES, pp. 6-7.
146 Clause 7.15.7(c) of the Draft Electricity Rule.
147 Intellihub, submission to the draft determination, p. 7.
148 Clause 7.16.6E(6) of the Draft Electricity Rule.
149 Clause 7.16.6E of the Draft Electricity Rule.
150 Clause 7.16.6E of the Draft Electricity Rule.

Our draft electricity rule would require MCs to facilitate access to real-time data according to the following minimum standards set out in the Rules:[151]

- **real-time data must be facilitated by, at a minimum, a one-way or unidirectional signal** - this clarifies that any access solution the MC develops would only need to facilitate data flowing out of the meter. We do not consider that it is appropriate to require MCs to enable other devices to send information back to the meter, as this may create cybersecurity risks and compromise the integrity of the metering installation. However, the draft rule would not prevent the MC from facilitating bi-directional flows of data if the MC considers that the meter would remain secure.
- **where real-time data is being communicated wirelessly, at least four parties must be able to access real-time data at the same time** - we consider the more parties that can access real-time data simultaneously, the weaker the data signal could get. However, multi-party, simultaneous access to real-time data is also likely to be a key benefit of real-time data from smart meters. Therefore, on balance, we consider that it is important that MCs develop access solutions that facilitate multi-party access. We consider that it is unlikely that more than four parties would need to access real-time data from the same customer's meter simultaneously. We note that multi-party access may only be possible for wireless solutions, because under the new min specs, meters would only have one accessible port. This port would likely be used by the first party that accesses real-time data from the smart meter. We welcome stakeholder views on whether multiparty access is feasible with a single port.

4.3.4 MCs would provide information in response to a retailer's request to facilitate real-time data access

As discussed in section 4.1.1, our draft rule would make retailers responsible for ensuring that real-time data is facilitated within 15 business days. This is after resolving any exceptional circumstances.

In practice, retailers would not have direct control over how long it takes real-time data to be made accessible from the smart meter because that is the role of the MC. Retailers must ensure that the time it takes for the MC to facilitate access and the time it takes for the retailer to engage with relevant parties does not exceed 15 business days.

As discussed in section 4.1, to facilitate a good customer experience, customers would only need to interact with their retailer, and retailers would update customers on the progress of their request. It follows then that MCs should inform retailers on the MC's progress to facilitating access so that the retailer can, in turn, keep their customer informed.

Our draft determination is to require MCs to notify retailers:[152]

- when the retailer's request to facilitate access has been completed
- if there are any exceptional circumstances that would require an extension to the 15 business day timeframe - these are the circumstances described in section 4.1.1
- if the MC cannot facilitate access - similarly, circumstances where access cannot be facilitated are described in section 4.1.1.

This ensures that MCs keep retailers informed throughout the process, which helps retailers facilitate a good customer experience for their customers.

151 Clause 7.15.7(c) of the Draft Electricity Rule.

152 Clause 7.15.7(d) of the Draft Electricity Rule. These obligations help the retailer meet their corresponding obligations under rules 59E(3), (5), (8) and (10) of the Draft Retail Rule.

4.3.5 MCs would facilitate secure access to real-time data

Technology is facilitating a more interconnected and interoperable power system. This increases the materiality of cybersecurity threats to the system. As discussed in section 2.2.4, our draft rule would make smart meters accessible to more devices, both wirelessly and through a wired connection. Stakeholders considered that there may be a risk of unauthorised access to real-time data if a bad actor can gain unauthorised access to a consumer's Wi-Fi network.[153]

The Commission considers that it is important that the smart meter remains secure to mitigate risks of unauthorised access and control of the smart meter. Breaches of smart meter technology could pose a significant threat to customers and the energy system.

Under existing arrangements, MCs must ensure that:

- the metering installation is secure, and that associated links, circuits and information storage and processing systems are protected by security mechanisms acceptable to AEMO.[154]
- energy data held in the metering installation is protected from local and remote access by suitable password and security controls.[155]
- access to energy data held in a small customer metering installation is only given to a person and for a purpose that is permitted under the Rules.[156]

We consider that much of the same security measures should be applied in the context of access to real-time data.

Our draft determination is to require MCs to ensure that:[157]

- access to real-time data is only given to a person for a purpose that is permitted under the rules - this is so that data is not provided to an unauthorised person.
- real-time data is protected from unauthorised access by suitable security controls - this could be controls that would protect data in cases of security breaches to a customer's Wi-Fi network.

The security measures that MCs implement to protect real-time data and the smart meter from unauthorised access would be in addition to other elements of our draft rule, including:

- any security standards and security protocols that would be specified in AEMO's real-time data procedures discussed in section 3.2
- requirements on parties to become a real-time data authorised recipient as discussed in section 4.2.

Question 9: Would our draft rule introduce appropriate security measures to protect customer information from being accessed by unauthorised parties?

4.3.6 Our draft rule would support competition

As discussed section 2.6, it is important for the market for metering services to be competitive. This means that our draft rule should not make it difficult for retailers to appoint a different MC at

153 Australian Energy Council submission to the directions paper, p. 3.
154 Clause 7.15.2 of the NER.
155 Clause 7.15.3 of the NER.
156 Clause 7.15.4(a) of the NER.
157 Clause 7.15.7(i) and (j) of the Draft Electricity Rule.

a premises where a customer and/or appointed representative is accessing real-time data from the smart meter.

Under our draft rule, where real-time data is being provided and the MC for the connection point (premises) changes:[158]

- the outgoing MC must transfer control of any existing real-time data stream, including any security controls, to the new MC
- the new MC must facilitate ongoing access to real-time data at no charge.

This means that our draft rule would not entrench an incumbent MC at a premises simply because the MC is facilitating access to real-time data. Our draft rule would also facilitate competition through improving interoperability. Real-time data access solutions would be designed such that control is transferable between different MCs. MCs would not be able to develop solutions where access to real-time data is managed or controlled by proprietary software or hardware that cannot be controlled by other MCs.

4.3.7 MCs would cooperate with any dispute resolution process facilitated by an energy ombudsman

Currently, customers can make complaints or raise disputes with their retailer or distributor. Although metering services are not directly provided by retailers, customers experiencing issues related to their meter will tend to raise these with their retailer since their relationship is with their retailer.

In our consultation paper, we sought feedback on whether a dispute resolution framework is needed to resolve potential issues related to real-time data.

Stakeholders considered that information needed to resolve energy disputes is currently difficult to access, and disputes in respect of real-time data services may compound the problem.[159] The Energy and Water Ombudsman, in a joint submission, proposed that MCs should be required to become members of energy ombudsman schemes, and that doing so would require MCs to cooperate with information requests from the ombudsman.[160]

The Commission agrees that customers should have clear pathways to make complaints and resolve disputes concerning services related to real-time data and any other energy services. We also consider that information needed to respond to the complaint or resolve the dispute should be accessible by the parties seeking to resolve the complaint or dispute.

However, we do not consider that a specific dispute resolution framework for real-time data is necessary or appropriate because it would be costly to implement, and there are other existing pathways for disputes and complaints that should be used. Therefore, disputes related to real-time data should be raised through existing dispute resolution processes where possible.

However, the Commission acknowledges the issues raised by stakeholders regarding the limitations of the existing processes.

The process and requirements for small customer complaints and dispute resolution, including for complaints referred to an energy ombudsman, are set out in the NERL.[161] These requirements include obligations on retailers and distributors to be members of an energy ombudsman scheme

158 Clause 7.15.7(h) of the Draft Electricity Rule.
159 Submissions to the directions paper: Energy and Water Ombudsman joint submission to the directions paper, p. 5; ECA, p. 5.
160 Energy and Water Ombudsman joint submission to the directions paper, p. 5.
161 Part 4 of the NERL.

and therefore, to cooperate with an energy ombudsman in relation to small customer complaints and disputes.[162] However, metering service providers are not required to be members of an energy ombudsman scheme.

As these requirements are set out in the NERL, the AEMC is unable to require MCs to be a part of an energy ombudsman scheme.

However, to resolve some complaints or disputes, including for real-time data, the energy ombudsmen may require information that retailers may find difficult to access. For example, we understand that some of the information energy ombudsmen often require to resolve disputes is metering information held by metering service providers, but metering service providers may not respond to retailers' requests for information or assistance. We would not want this issue to be exacerbated by the introduction of a real-time data framework.

We therefore consider that it is appropriate for the Rules to require metering service providers to comply with information requests from retailers where the retailer has received a request for information or assistance from an energy ombudsman to resolve a complaint or dispute. This would address concerns raised by stakeholders around the lack of access to information that is necessary for energy ombudsmen to resolve customer complaints and disputes.

Therefore, our draft rule would:

- enable retailers who have received a request for information or assistance from an energy ombudsman relating to a customer complaint or dispute under section 85 of the NERL, to request information or assistance from the MC, if reasonably necessary for the retailer to respond to the energy ombudsman's request.[163]
- require MCs who receive such a request from a retailer to cooperate with the retailer by:
  - providing any information in their custody or control and responding to any reasonable request for assistance, and[164]
  - requesting information or assistance from a MDP or MP where that information or assistance needs to be provided by the MDP or MP.[165]
- require MDPs and MPs who receive such a request from the MC to cooperate with the MC by providing any information in their custody or control and responding to any reasonable request for assistance.[166]

The AEMC proposes to recommend that the obligation on MDPs and MPs is classified as a tier 3 civil penalty provision. This is discussed further in appendix D.5.

This obligation on MDPs and MPs would commence sooner than the rest of the rule, on 1 July 2026.[167] As this obligation relates to data more generally, we consider this change can be introduced sooner.

162 Section 86 of the NERL.
163 Clause 7.3.2(o) of the Draft Electricity Rule.
164 Clause 7.3.2(p)(1) and (2) of the Draft Electricity Rule.
165 Clause 7.3.2(p)(3) of the Draft Electricity Rule.
166 Clause 7.3.2(q) of the Draft Electricity Rule.
167 Schedule 1 of the Draft Electricity Rule.

4.4 The B2B procedures may provide clarity on how businesses communicate with each other

The B2B procedures set out the standards and processes for exchanging information between B2B parties.[168] B2B parties include DNSPs, MCs and retailers.

As discussed above, our draft rule would require MCs and retailers to exchange information to facilitate access to real-time data. The B2B procedures provide for B2B communications to support each of the services set out in the minimum services specification.[169] Given the draft electricity rule would amend the minimum services specification to include a real-time data service (as discussed in section 2.2), the B2B procedures may need to be amended to account for communications to support this new service.[170]

During the rule change process, we have engaged with the information exchange committee (IEC) established by AEMO. The IEC manages the ongoing development and changes to B2B procedures.[171] The IEC considered that the B2B procedures may be amended in the context of communications related to real-time data services.

Our draft rule proposes a commencement date of 1 January 2028. We consider that AEMO, with the advice of the IEC, will have sufficient time to make any required updates to the B2B procedures after any final rule is made and before that time. Our draft determination is to not include a transitional provision to require this.

4.5 Application of the rule

Our draft rule would only apply to small customers.[172] Consistent with the *Accelerating smart meter deployment rule*, our draft rule would not apply to embedded networks, or in Victoria. Table 4.2 discusses the application of our rule further. The application of the rule to the Northern Territory is discussed in appendix D.4.

Table 4.2: Application of the rule

Category	Application	Reason
Small customers (customers that consume less than 100 megawatt hours per annum)	The draft rule would only apply to small customers, not large customers	We consider that large customers already have access to real-time data and benefit from real-time data through participation in VPPs. As noted by Intellihub, large customers are likely to have more bespoke requirements and a greater range of existing options to access this data. Increased costs will be incurred by MCs and retailers to provide real-time data services to large customers.[1]
Embedded networks	The draft rule would not apply to embedded networks	Embedded networks have different metering and retail arrangements and relationships. Embedded network managers have sole control over the embedded network, including the metering arrangements. They

168 Clause 7.17.3 of the NER.
169 Clause 7.17.3(a)(1) of the NER.
170 See amendment to clause S7.5.1 and Table S7.5.1.1 in Schedule 2 of the Draft Electricity Rule.
171 Clause 7.17.7 of the NER.
172 Division 9B, rule 59D(1) of the Draft Retail Rule and clause 7.15.7(a) of the Draft Electricity Rule.

Category	Application	Reason
		are potentially already using data to coordinate the network to the customers' benefit. Our rule is not designed to apply to the specific arrangements in embedded networks and therefore could not apply to embedded networks.
NEM Jurisdictions	The draft rule would generally not apply to Victoria	The NER and NERR (including any changes to those rules) apply differently in Victoria. Under Victoria's legislative framework: • the NERR, other than Part 12, does not apply; • amendments to the NER will generally apply. However, the Victorian Minister may declare that certain NER provisions (including provisions in Chapter 7 of the NER) do not apply in Victoria. This has implications for this rule change as it involves significant amendments to the NERR, which mostly does not apply in Victoria. It is the amendments to the NERR that create the obligation for retailers to facilitate access to real-time data. Therefore, the non-application of the NERR amendments in Victoria will mean that, in practice, there is not the same ability for small customers in Victoria to ask retailers to enable real-time data. As is standard practice with all rule changes, the Victorian Government will need to consider changes that may be required to the Energy Retail Code of Practice, National Energy Retail Law (Victoria) Regulations 2024, or other legislative arrangements to implement the rule change. As discussed in the Directions Paper, Victorian smart meters are ZigBee enabled, meaning they can communicate near real-time data to customers. This access is universal and free to Victorians. Therefore, the Victorian Government may conclude that the rule change is not required for Victorian consumers. However, ZigBee is not widely interoperable.

Source: [1]Intellihub submission to the directions paper, p. 1.

5 The rule would contribute to the energy objectives

5.1 The Commission must act in the long-term interests of energy consumers

The Commission can only make a rule if it is satisfied that the rule will or is likely to contribute to the achievement of the relevant energy objectives.[173]

For this rule change, the relevant energy objectives are the NEO and NERO.

The NEO is:[174]

> to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to—
>
> (a) price, quality, safety, reliability and security of supply of electricity; and
>
> (b) the reliability, safety and security of the national electricity system; and
>
> (c) the achievement of targets set by a participating jurisdiction—
>
> (i) for reducing Australia's greenhouse gas emissions; or
>
> (ii) that are likely to contribute to reducing Australia's greenhouse gas emissions.

The NERO is: [175]

> to promote efficient investment in, and efficient operation and use of, energy services for the long term interests of consumers of energy with respect to—
>
> (a) price, safety, reliability and security of supply of energy; and
>
> (b) the achievement of targets set by a participating jurisdiction—
>
> (i) for reducing Australia's greenhouse gas emissions; or
>
> (ii) that are likely to contribute to reducing Australia's greenhouse gas emissions.

The targets statement, available on the AEMC website, lists the emissions reduction targets to be considered, as a minimum, in having regard to the NEO and NERO.[176]

5.2 We must also take these factors into account

5.2.1 We have considered whether to make a more preferable rule

The Commission may make a rule that is different, including materially different, to a proposed rule (a more preferable rule) if it is satisfied that, having regard to the issue or issues raised in the rule change request, the more preferable rule is likely to better contribute to the achievement of the NEO and NERO.[177]

For this rule change, the Commission has made a more preferable draft electricity rule and more preferable draft retail rule. The reasons are set out in section 5.3 below.

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173 Section 88(1) of the NEL and 236(1) of the NERL.
174 Section 7 of the NEL.
175 Section 13 of the NERL.
176 Section 32A(5) of the NEL and 224A(5) of the NERL.
177 Section 91A of the NEL and section 244 of the NERL.

5.2.2 We have considered how the rule would apply in the Northern Territory

In developing the draft rule, the Commission has considered how it should apply to the Northern Territory according to the following questions:

- Should the NEO test include the Northern Territory electricity systems? Yes. The Commission considers that the NEO test should include the Northern Territory electricity systems given that this rule would apply in the Northern Territory (even though it will have no practical effect).
- Should the rule be different in the Northern Territory? Yes. The Commission's draft rule is a differential rule that does not apply in the Northern Territory. The Commission considers that a uniform rule would not achieve the NEO as it would increase costs, complexity and ambiguity in the Northern Territory because amendments to the NT NER would be needed to implement those parts of the rule that apply in the NT NER, but would have no practical effect without the other parts of the rule that do not apply. Therefore, the Commission considers that a differential rule that disapplies the entirety of the draft rule from adoption into the NT NER would be a suitable solution. The Commission's draft determination is to make a differential rule so that the draft rule does not have effect in the Northern Territory and no amendments to the NT NER will need to be made as a result of any final rule. The Commission considers that, in light of the issues identified above, a differential rule to not apply the draft rule in the NT NER will, or is likely to, better contribute to the achievement of the NEO than a uniform rule or differential rule that applies parts of draft rule.

See appendix D for more detail on the legal requirements for our decision.

5.2.3 We have considered the consumer protections test for this rule change

In addition to applying the NERO, the Commission must, where relevant, satisfy itself that the rule is "compatible with the development and application of consumer protections for small customers, including (but not limited to) protections relating to hardship customers" (the consumer protections test).[178] Where the consumer protections test is relevant in making a rule, the Commission must be satisfied that both the NERO test and the consumer protections test have been met.[179] If the Commission is satisfied that one test, but not the other, has been met, the rule cannot be made (noting that there may be some overlap in the application of the two tests).

The Commission is satisfied that the draft rule meets the consumer protections test for the reasons set out in section 5.3 below.

5.3 How we have applied the legal framework to our decision

The Commission must consider how to address challenges of accessing real-time data from smart meters against the legal framework.

The Commission has considered the NEO, the NERO, the consumer protections test and the issues raised in the rule change request, and has assessed the more preferable draft rule against the assessment criteria outlined in the consultation paper.

We identified the following assessment criteria to assess whether the proposed rule change, no change to the rules (business-as-usual), or other viable, rule-based options are likely to better contribute to achieving the NEO and NERO:

- Outcomes for consumers

178 Section 236(2)(b) of the NERL.

179 That is, the legal tests set out on sections 236(1) and (2)(b) of the NERL.

- Principles of market efficiency
- Innovation and flexibility
- Implementation considerations

These assessment criteria reflect the key potential impacts – costs and benefits – of the rule change request, for impacts within the scope of the NEO and NERO. These assessment criteria were proposed in our consultation paper. We have not changed these criteria based on stakeholder support for these criteria.

The rest of this section explains why the draft rule is likely to better contribute to achieving the NEO and the NERO than the proposed rule, and how it will meet the consumer protections test, based on each of the assessment criteria.

5.3.1 Delivering good outcomes for consumers

Our draft rule would deliver good consumer outcomes by:

- **Enabling consumer choice -** our draft rule enables consumers to choose how to access real-time data. Our draft rule would give consumers the option to access real-time data from smart meters or from other devices. Consumers with meters installed before 2028 may choose to pay to bring forward the replacement or retrofit their meter to access real-time data, if these consumers want to avoid the installation of alternative devices. Consumers could also choose not to access real-time data from the smart meter because our draft rule only requires access to be enabled if consumers request access.
- **Facilitating a good consumer experience -** our draft rule leverages the existing relationship between retailer and their customers. To access real-time data, consumers would simply request access to real-time data from their retailer or appoint representatives to access this data on their behalf.
- **Enabling universal access to real-time data at low cost -** whilst consumers would pay implementation costs and the costs to change the min specs, these costs are low. In return, all consumers would be able to access real-time data from smart meters at no direct charge with some customers having access at no charge as soon as 2028.
- **Ensuring good consumer protections -** our draft rule would not enable retailers to charge consumers more than the reasonable costs incurred to facilitate access to real-time data. Our draft rules would require any party that wants access to real-time data to first obtain consumer consent. Our draft rule would also require real-time data to be treated as affected customer information. This ensures consumers experiencing family violence consent to enabling parties to access real-time data.

5.3.2 Improving market efficiency

In considering whether to make a draft rule, the commission considered whether a draft rule would lower costs for consumers. The draft rule would improve:

- productive efficiency - all consumers would have access to real-time data at the lowest costs, which in turn reduces site monitoring costs. This means that customers would continue to manage CER but at lower costs to consumers.
- dynamic efficiency - real-time data from smart meters facilitates interoperability which means more technologies can access real-time data. This supports more future innovators using real-time data to deliver services to consumers including supporting HEMS.

As explained in chapter 2, our draft rule would lead to greater productive efficiency than the proposal outlined in the rule change request because it would enable universal access to real-time data at lower cost. The proposal in the rule change request would socialise the costs of meter replacements, which, as shown by the CBA, would impose high costs on consumers. Therefore, we consider the draft rule is likely to better contribute to the achievement of the NEO and NERO than the proposed rule.

5.3.3 Encouraging innovation and maintaining flexibility

Our draft rule would encourage energy service providers to use real-time data from smart meters to deliver value for consumers in innovative ways. This is because our draft rule makes it easier and less costly to access real-time data.

Our draft rule would also facilitate interoperability which means more technologies would be able to access real-time data to provide innovative services to consumers.

We consider that our draft rule would also be sufficiently flexible to enable MCs to develop a range of real-time data access solutions. As discussed further in chapter 3 and section 4.3, whilst the draft rule imposes clear obligations on MCs and retailers and clarifies expectations around how real-time data should be made accessible, we consider there are multiple ways access to real-time data from smart meters could be enabled under the requirements of the draft rule. For example, wireless access could be provided using cloud technology or onsite devices. We consider that the draft rule appropriately provides clarity to give certainty to industry and protect consumers whilst not being overtly prescriptive. Therefore, we consider the draft rule is likely to better contribute to the achievement of the NEO and NERO than the proposed rule.

5.3.4 Facilitating smooth implementation

Our draft rule also leverages existing relationships and responsibilities to implement the proposed framework to facilitate a smooth implementation. For example, retailers would continue to be responsible for consumer engagement, AEMO would be responsible for setting standards and protocols, and MCs would be responsible for ensuring new smart meter technology is accessible to all consumers.

The draft rule would require multiple pieces of work progressed by separate parties. The draft rule would allow for a two-year transition period. This is intended allow sufficient time for:

- AEMO to develop real-time data procedures and accreditation requirements
- IEC to update the B2B procedures
- MCs and retailers to consider updates to procedures and consult with industry when developing the real-time data service

Our draft rule would be easier to implement than the approach proposed in the rule change request, and therefore, we consider it is likely to better contribute to the achievement of the NEO and NERO than the proposed rule. This is because our draft rule also aligns the installation of new meters with new min specs as per the natural replacement cycle of meters. This allows the draft rule to be implemented under existing meter replacement plans and would not require significant changes to these plans. The proposal in the rule change request would require metering providers to revisit customer premises to retrofit or replace meters, most of which would have been installed relatively recently and would not be due to be replaced.

A Real-time data provides incremental value to consumers

All consumers are different and derive different value from data. In our directions paper, we sought stakeholder feedback on whether consumers would derive value from accessing real-time data.

A.1 Currently, consumers and third parties can access a range of data

As summarised in Table A.1 the Rules and other frameworks facilitate consumers and their appointed representatives to access a range of data to meet various consumers needs.

Table A.1: Types of data accessible under existing frameworks

Type of data	Description	Access pathway
Energy consumption data	Any type of data from a meter that is more than 24 hours old.	Consumer data right (CDR) or Under the Rules as per NER clause 7.10.3 and 7.15.5. NER rule 7.14 metering data provision procedures enable consumers to request data up to four times a year without charge. or Retailer applications and web portals.
Basic PQD	Voltage, current and phase angle received at least once per day.	Distribution network service providers (DNSPs) receive this data for free under Clauses 7.15.5 and 7.16.6C of the NER (commences 1 July 2026).
Advanced PQD	Voltage, current and phase angle received more than once per day.	Parties must commercially negotiate with Metering Coordinators (MC) to access this data.
Near-real-time data	Energy consumption data at a lag greater than 5 seconds.	Consumers can arrange installation of digital meter readers that attach to the meter and reflect a consumer's energy consumption data in a mobile application. Victoria successfully implemented a mechanism that provided Victorian consumers with access to near

Type of data	Description	Access pathway
		real-time data through digital meter readers. There was a material take-up of these devices.

These types of data are valuable to consumers because they inform network planning and operation, and a range of consumer energy choices.

A.2 Real-time data can deliver incremental value for consumers

A.2.1 CER can lower consumer bills

CER operators, for the purposes of this determination, are parties that manage the import and export of consumers' solar photovoltaic, battery energy storage system and electrical vehicle charging assets, and to an extent, smart appliances.

CER is primarily operated by intelligent machines or systems like:

- Home energy management systems (HEMS) which uses an onsite device to manage CER.
- Virtual power plants (VPP) which is a cloud-based management system.

The benefits of CER for consumers with CER technologies include:

- flexibility in how and when they use energy - CER operators can manage CER in a way that best responds to market price signals, like time-of-use tariffs, to lower consumers' energy bills. For example, CER will consume energy from the grid when prices are low and export energy when prices are high.
- financial returns from allowing CER technologies to be used in the wider power system
- contributing to the achievement of a net zero energy system.

More integrated CER also has indirect benefits for consumers without CER including:

- lower system and wholesale cost
- a net zero energy system.

A.2.2 Sometimes limits are placed on how much energy CER can export to the grid

AEMO, networks, and retailers set export limits to manage fluctuations in frequency and congestion on the network. Export limits are placed in the event of an emergency backstop or when participating in a dynamic operating envelope (DOE).

This means that CER operators would need to change the way they manage CER to meet the conditions of the export limit.

A.2.3 CER operators use real-time data to manage CER under export limits

Site monitoring is the constant monitoring of energy flows at a customer's connection point with the grid. It is useful for a CER operator to be able to conduct site monitoring to know how much energy the premises is consuming from the grid i.e. the net imports or exports. This information, accessed continuously, is real-time data.

With this information the customer would be able to calculate how much energy is being used by the household and how much energy is being used or generated by the CER system.

Without using real-time data to conduct site monitoring, it would be impossible for a CER operator to know, with certainty, whether the CER system is complying with the export limit unless the entire CER system is shut down.

Box 4: Example: Using real-time data to operate CER under export limits

Consider a CER system that is generating 10kW. Real-time data tells the CER operator that the premise is consuming 2kW, so 8kW is being exported to the grid. When the system is not meeting the minimum required load to keep the system secure, an export limit would be set to raise the load.

A CER operator has two options:

1. Shut down the CER. This means the consumer would be consuming 2kW from the grid.
2. Curtail CER output to 2kW. This means that no energy would be exported or imported from the grid. The household can still use CER.

Whilst option 1 may be the simplest, option 2 may lower consumer bills if importing from the grid is positively priced. Without real-time data from the connection point, option two is not possible – the CER operator would not know how much to curtail the CER system.

Separately DNSPs could use real-time data to deliver other network services. For example, DNSPs can monitor the site for the purposes of fault detection and respond to faults quicker.

A.2.4 The value of real-time data is greater than the benefits managing CER under export limits

All consumers are different and derive different value from data.

In addition to managing CER, real-time data can support customers to make more informed energy choices.

Access to real-time data encourages innovation by creating the opportunity for industry to use real-time data in new ways to provide a range of services that deliver value for all consumers.

The Commission agrees that real-time data delivers value for consumers. The Commission considers that the regulatory framework should encourage the market to maximise the value of real-time data for all consumers. We consider that all consumers should be able to access real-time data at low cost and use real-time data in whatever way they consider would deliver value.

A.3 The value of real-time data will likely grow with time

Demand for real-time data is currently modest.

As more consumers continue to adopt CER, we anticipate that demand for real-time data will likely grow, in part, because of the progression of emergency backstop-type mechanisms and other DOEs across jurisdictions. Customers may choose to access real-time data to manage their CER during periods of export limits.

Victoria has implemented emergency backstop requirements.[180] New South Wales is looking to implement emergency backstop requirements in March 2026.[181] In Queensland, AEMO is recommending the implementation of emergency backstop for CER systems less than 10kW. AEMO is also recommending the consideration of an emergency backstop in Tasmania.

180 For more information of the Victorian emergency backstop mechanism see here.

181 NSW has recently published a consultation report on its solar emergency backstop mechanism, see here.

As explained earlier, our draft rule supports interoperability, which means more devices can access real-time data. This could potentially unlock new use cases for real-time data and encourage more energy service providers to use real-time data to deliver value for consumers.

A.4 It is difficult to access real-time data from smart meters

A.4.1 Currently, accessing real-time data is costly

Currently, CER system operators install CTs, power meters, or other devices near the meter to access real-time data. These are configured to communicate with CER systems. The choice between which device to install depends on the characteristics of the individual CER system and whether it is compatible with a CT or power meter. The cost of these devices is generally packaged up as part of the cost of the CER service.

If a consumer has multiple CER operators at a single premises, then each would likely have their own devices installed near the smart meter to access real-time data. If a consumer has a home energy management services (HEMS) or is part of a virtual power plant (VPP), only one device is required to access real-time data, because the device would send data directly to the HEMS or VPP cloud system.

Real-time data could be accessed directly from the smart meter

To avoid the need for other devices, real-time data could be accessed directly from the smart meter if a CER device connects to a physical meter communications data port (port). However, this is not being done currently because ports are not accessible. Currently, MCs secure the ports in a locked box on the meter. This ensures that bad agents cannot compromise the integrity and security of the meter.

Some smart meters in the existing fleet, and installed in the near term, do not have ports that could be used in this way.

No other solution to access real-time data from the smart meter has been developed and tested in the market. MCs have suggested two potential ways that smart meters could facilitate access to real-time data without compromising the meter's integrity and security. Both solutions proposed are wireless to mitigate any security risk. They are as follows:

1. General wireless access via the cloud: The smart meter could send real-time data to a secure cloud over Wi-Fi. An electricity service provider then could pull the data from this cloud.
2. Wireless access given to a specific CER device: The smart meter could send data wirelessly over Wi-Fi directly to the customer's CER device or some intermediary device installed at the premises.

These solutions require the meters to be able to communicate wirelessly over Wi-Fi. MCs noted that many, if not most, of the meters being installed do not have this functionality at present.

We consider that in addition to the wireless solutions, there is still the potential for CER devices to physically connect to a port. However, unlike the ports currently installed with the meter, this port would need to be accessible and only facilitate a one-way flow of information that prevents devices connected to this port from controlling the meter or compromising the meter's security and integrity.

Commercial negotiation to access real-time data from the smart meter is difficult

The Rules and AEMO procedures currently do not provide a clear and explicit framework that supports consumer and third-party access to real-time data from smart meters.

The current arrangements under the metering framework allow for third parties to commercially negotiate with MCs to access real-time data or similar services, such as through the metering installation inquiry service.[182]

From bilateral discussions with stakeholders, we understand that third-party commercial negotiations to access real-time data can be difficult. Retailers may create barriers to commercial negotiations between MSPs and third parties to access real-time data, and MSPs may not offer fair and reasonable prices or terms and conditions for third-party access.

Due to the barriers to accessing real-time data from smart meters, consumers and third parties often currently opt for alternative ways to access real-time data.

A.4.2 Enabling access to real-time data from smart meters avoids the cost of installing other devices

Stakeholders consider that while consumers can use these alternative methods to access real-time data and take advantage of the benefits that real-time data provides, opting for these alternatives is costly.[183] Under the present arrangement, consumers pay for any additional metering infrastructure that records real-time data.[184]

The Commission considers that enabling access to real-time data from the smart meter could save consumers the cost of installing alternative devices. This assumes that accessing real-time data from smart meters is a close to perfect substitute to accessing real-time data from other devices. This means that we would expect consumers and third parties to access real-time data from smart meters when it is available.

If consumers can access real-time data from the smart meter, then there is no need to install other devices. We assume the cost savings from avoiding these device installations would be passed through to CER consumers.

A.4.3 Enabling access to real-time data from smart meters is also costly

As many meters currently installed do not have the in-built functionality to communicate real-time data, there are two material costs consumers would incur to enable access to real-time data:

1. Metering infrastructure costs: There are costs of replacing or retrofitting meters without real-time data functionality before the end of its economic life and therefore out of the natural replacement cycle. This includes the cost of new devices and installation costs.
2. Implementation costs: These costs vary depending on how MCs enable access to real-time data. MCs have not commenced designing these solutions, so significant research, development and testing would be required. These solutions would have to be interoperable and secure.

For future meters, the costs of accessing real-time data may be reduced by embedding real-time data communications functionality as part of the meter's min specs.

182 Service (e) in Table S7.5.1.1 in Schedule 7.5 of the NER.

183 Submissions to the consultation paper: Rheem, pp. 6-7; SMA Australia, p. 1.

184 Submissions to the consultation paper: Rheem, pp. 6-7; SMA Australia, p. 1.

B How the CBA shaped our draft determination

We engaged Oakley Greenwood to conduct an independent CBA of different options to deliver universal access to real-time data from smart meters.

This appendix provides a brief overview of the CBA's findings and how these relate to the draft rule. For a more comprehensive analysis undertaken by Oakley Greenwood, please see the draft CBA report.

B.1 Oakley Greenwood estimated the costs and benefits of six scenarios

Oakley Greenwood undertook a cost-benefit assessment of different market interventions that would allow customers or their appointed representatives to access real-time data from smart meters. The key research question explored by the CBA is: How can all consumers access real-time data from smart meters at low cost to the market?

Inputs for the CBA were developed by Oakley Greenwood with input from SMEs in the areas of smart meter functionality and CER systems. The inputs included information from submissions to our directions paper and earlier work on the costs and timing of the accelerated rollout of smart meters.

B.1.1 The analysis is relative to a business-as-usual scenario (BAU)

Oakley Greenwood assessed a range of scenarios relative to a world where the Commission makes no rule - defined as the business-as-usual (BAU) scenario. The BAU scenario adopts a range of uptake and cost assumptions, informed by Oakley Greenwood's expertise and stakeholder consultation:

- 70% of solar, 30% of battery or vehicle-to-grid installations will require site monitoring. The costs of site monitoring for these customers are estimated as follows:
  - $50 (the approximate cost of a CT) for one quarter of households and businesses, and
  - $450 (the approximate cost of a power meter) for the remaining three quarters of households and businesses,
  - together, these costs correspond to approximately $999 million in total over the next 20 years, in net present value terms.
- Households and businesses are estimated to invest $64 million over the 15 years from 2030 to 2045 in optical devices, in net present value terms.

B.1.2 Oakley Greenwood modelled five scenarios against the BAU scenario

Oakley Greenwood modelled the costs and benefits of five scenarios relative to the business-as-usual scenario.[185] Figure B.1 is an excerpt from page 2 of the draft CBA report and outlines the five scenarios.

185 Oakley Greenwood also modelled a sixth scenario to require retailers to provide interval data over the internet at a one-day lag. This is separate to real-time data. This was in response to stakeholders' views on the benefits of data at a day's lag.

Figure B.1: Five scenarios modelled by Oakley Greenwood

The five scenarios

The scenarios examined were a base case (Scenario 0) and five potential changes that could be made under the rule change. Note that the five scenarios examine the key factors.

0. The base case assumes that the current rollout of smart meters continues.
1. Retailers must provide RTD to any customer that wants it, free of charge, by the end of 2030
2. Retailers must provide RTD to any customer that wants it, free of charge, by the end of 2040
3. RTD must be available to any customer that wants it, free of charge, by the end of 2030; the SM would need to comply with a change (in 2026) in minimum functionality specification (MIN Spec)
4. RTD must be available to any customer that wants it, free of charge, by 2040, with the SM needing to comply with a change in the MIN Spec (to be implemented in 2029)
5. As above, except customers installing CER that can utilise RTD to avoid site monitoring costs are assumed to bring forward the replacement of their existing SM

Note: Whilst scenarios 1&2 do not model a change to the min specs, the scenarios assume that all new meters would be installed with Wi-Fi communications functionality.

In all scenarios, Oakley Greenwood modelled that customers could pay to access real-time data before it becomes available at no charge, if the real-time data can be accessed from the smart meter. In each of the scenarios, Oakley Greenwood assumed all remaining customers without real-time data request it as soon as it becomes available at no charge. Oakley Greenwood provided some sensitivity analysis on this assumption.[186]

Whilst scenario 1 is similar to the position proposed in ECA's rule change request and scenario 2 is similar to the proposed approach in the directions paper, the scenarios were not designed with the intent of being implemented in a Rules framework. Rather, the purpose of modelling a range of scenarios was to test how the costs to consumers change depending on:

- the date at which access is available at no charge
- the mechanism through which access is achieved - some scenarios included a change to the min specs of new meters, representing a uniform technological approach to making this data available at low cost.

This approach was adopted to allow us to answer the key research question for the CBA, which would then inform our draft determination and rule.

186 This reflects that customers do not always request things available at no charge, for example in Victoria, installers can profit from installing optical devices to provide real-time data to consumers, even with a profit incentive, only around one in three Victoria customers have received an optical device over the 15-years of the Victorian Energy Upgrades program.

B.2 Enabling access to real-time data from smart meters is net beneficial in some scenarios

B.2.1 The results clarify the direct market benefits accrue mostly to CER customers

The CBA finds that the primary market benefit of enabling access to real-time data from smart meters is the avoided cost of installing alternative devices to smart meters. This means that most benefits would accrue to CER customers, while all customers would incur costs.

The CBA estimated that the size of this avoided cost (benefit) would be different depending on the type of alternative device that would be avoided, which can vary depending on a customer's CER characteristics. The CBA estimates that the avoided costs are approximately:

- $450 if a customer needs to install a power meter to access real-time data or
- $50 if a customer would need to install a CT.

The CBA also found other potential market benefits which may accrue to all consumers including:

- Better utilisation of smart appliances - the CBA considered that some smart appliances are incompatible with power meters and CTs and so enabling access to real-time data from smart meters would create new benefits by triggering these appliances to ramp down on cloudy days to limit imports from the grid. This is estimated to generate a savings of $2 per annum for hot water and $4 per annum for EV charging.
- Reduced wholesale costs driven by lowering consumption - The CBA estimates that consumers could reduce their energy use by 6% by responding to real-time data. This could result in a market benefit of $14.40 per customer per annum.

Given the assumptions underpinning these benefits, we consider benefits of better utilisation of smart appliances and reduced wholesale costs, as a direct result of consumers actively responding to real-time data, could be difficult to realise.

B.2.2 The results clarify the direct market costs that would be imposed on all consumers

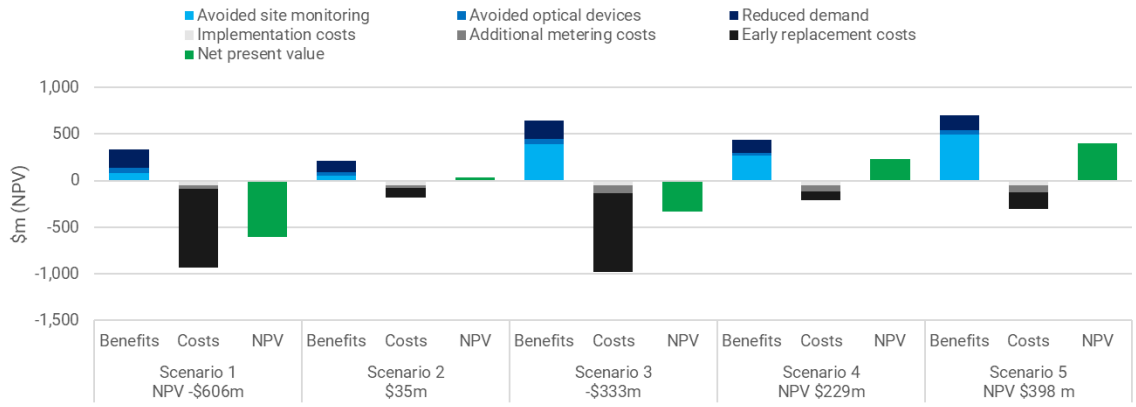
The CBA results show that enabling access to real-time data from smart meters would impose costs on consumers:

- implementation costs of our draft rule would be a once-off cost of approximately $5 per NMI. This would include administrative costs and the costs of developing and implementing wireless communications infrastructure and protocols, and cybersecurity protections.
- retrofitting or replacing meters before the end of the economic life of the meter would be approximately $500-$700 per NMI, depending on the costs incurred due to diseconomies of scale The closer a meter is to the end of its economic life, the lower the cost to consumers of replacing the meter.
- the incremental cost of adding functionality at the point of manufacture would be up to $10 per meter (the CBA estimates $5 for a Wi-Fi chip and $5 for data ports), which corresponds to the cost per meter of changing the min specs.

B.2.3 The results show that enabling access for all consumers from 2030, at no charge, could impose a net cost on all consumers

Figure B.2 below summarises of Oakley Greenwood's main results.

Figure B.2: Summary of Oakley Greenwood's results



Source: AEMC

The results in scenarios 1 and 3 demonstrate that enabling access to real-time data, at no charge, for all consumers from 2030 could impose a net cost to the market. This is because enabling access, at no charge by 2030 could mean replacing most of the metering fleet earlier than otherwise necessary, which would be costly.[187]

Delaying access, at no charge, from 2030 to 2040, as is modelled in scenarios 2, 4, and 5, would likely deliver a net benefit. This is because doing so could minimise the costs incurred in replacing existing meters before the end of their economic lives.

Imposing slightly higher costs would materially increase the benefits

This CBA found that the highest net benefit scenarios were not the lowest cost scenarios. Scenario 2 was the lowest cost scenario that still delivered net benefits. However, scenarios 4 and 5 were higher cost but delivered materially higher benefits driven by changing the min specs.

The costs and benefits are sensitive to the uptake of real-time data from smart meters

In all scenarios, Oakley Greenwood assumes 100% of consumers would request access to real-time data from smart meters when it is available at no charge.

In practice, however, it is unlikely that all consumers would request access because not all consumers may consider real-time data from smart meters valuable.[188]

Oakley Greenwood tested the sensitivity of changing the uptake of real-time data from smart meters. The results show that:

- the benefits increase with greater adoption of the service - that is, the more CER customers that take up real-time data from smart meters the higher the net benefits
- the costs of enabling access, at no charge, from 2030 reduces if fewer consumers request access - this is because fewer meters would be replaced before the end of the meter's economic life.

Importantly, the modelling shows that under scenarios 2, 4 and 5, because the costs are relatively low, less than 20% of consumers would need to access real-time data from the smart meter for the benefits to break even with the costs.

187 Oakley Greenwood's modelling assumes that all customers request access as soon as it becomes accessible at no charge.

188 For a customer to consider the data valuable, it does not need to result in any market benefit or behavioural changes.

Question 1 of this draft determination seeks stakeholder feedback on the likely uptake of real-time data from smart meters under our draft rule.

B.3 The CBA results informed our draft determination

B.3.1 The CBA analysis produced three key findings:

1. Changing the min specs is relatively low cost and could increase benefits
   - Oakley Greenwood estimates a total increase in metering costs of $10 per meter or $0.67 per meter per year assuming a 15-year asset life
   - changing the min specs could increase the number of consumers who access real-time data from smart meters which increases benefits.
2. The costs of early meter replacement are high:
   - 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. We consider that creating a date by which access is made available, at no charge, to all consumers could create an unacceptable cost risk given that may not be offset by the benefits, depending on the level of uptake of the service.
3. The cost to industry to implement secure access to real-time data from smart meters is relatively low.

B.3.2 The findings support our draft determination

We consider that the key findings of the CBA suggest that our draft rule would likely be net beneficial to consumers.

As explained in chapter 2 our draft rule would:

- change the min specs. This approach is adopted because the CBA showed that changing the min specs is relatively low cost and would materially increase the benefits.
- see meters replaced according to the existing replacement schedule, unless consumers choose to replace or retrofit the meter early. This is because the CBA found that replacing meters out of schedule, before the end of their economic lives, would be costly, and requiring this outcome as part of the rules package would therefore impose material costs on the market.

Our draft rule would ensure that, in the long term, all consumers can access real-time data from smart meters, which the CBA shows would cost each consumer less than $1 per year.

B.4 Oakley Greenwood only modelled market benefits and costs

In making rule changes, the Commission considers the market benefits and market costs of potential reform. That is, the Commission does not make rules based on its impact on a single consumer's energy bill, but rather, based on the impact on all consumers' energy bills. We must consider whether it is likely that the total benefits of a rule to all consumers outweigh the total costs.

As discussed in appendix A.2.4, we recognise that accessing real-time data from smart meters is valuable to consumers in a range of dimensions.

For the purposes of the CBA, we must distinguish between the value that is specific to the individual consumer, and that which translates into benefits for all consumers.

Oakley Greenwood modelled the benefits and costs that the Commission may consider when making a rule change.

As discussed above, the CBA results show that accessing real-time data from smart meters would deliver benefits to consumers. This assessment is made based on the estimated direct benefits alone. We consider that there are also likely indirect benefits, but these are difficult to quantify. For instance, as discussed in section 1.3, our draft rule may support the better integration of CER and indirectly lower wholesale and system costs for all consumers.

To the extent these indirect benefits materialise, they would increase the net benefits of the scenarios considered.

C Rule making process

This rule change request includes the following stages:

- a proponent submits a rule change request
- the Commission initiates the rule change process by publishing a consultation paper and seeking stakeholder feedback
- stakeholders lodge submissions on the consultation paper and engage through other channels to make their views known to the AEMC project team
- the Commission publishes a draft determination and draft rule
  - stakeholders lodge submissions on the draft determination and engage through other channels to make their views known to the AEMC project team
- the Commission publishes a final determination and final rule.

This rule change also included a directions paper stage before this draft determination, where clarifying questions and policy positions were tested with stakeholders. Following feedback on the directions paper and diverging stakeholder opinions, we commissioned an independent CBA. To accommodate these modifications, and given the complexity of the issues considered as part of the rule change, the publication date of the draft determination was extended.

You can find more information on the rule change process on our website.[189]

C.1 The proponent proposed a rule to increase the value of smart meters to consumers

On 24 June 2024, ECA submitted a rule change request arguing that all consumers would benefit from access to real-time data from the smart meter, but that it is difficult to access this. The proposal requested the AEMC make a rule to enable consumers and their appointed representatives to access real-time data from smart meters.

ECA considered that this would increase the value of smart meters by ensuring that the data they produce is accessible and actionable for all consumers.

C.2 The proposal addressed barriers to access real-time data

This rule change request seeks to improve consumer accessibility to real-time data. As explained in appendix A.4, consumers need to pay for separate devices to access real-time data. This rule change request considers that the cost of accessing real-time data is necessarily high and the cost would be much lower if consumers could access real-time data directly from the smart meter. As explained in appendix A.4 it is difficult to access real-time data from smart meters. The Rules do not provide a framework that facilitates access to real-time data from smart meters.

C.3 It proposed to do so by introducing an enabling framework for access to real-time data from the smart meter

Ultimately, the proposal intends to create a framework to enable access to real-time data from the smart meter, at no charge. This would give consumers greater optionality over how consumers access data. This enables consumers to make more informed energy choices.

189 See our website for more information on the rule change process: https://www.aemc.gov.au/our-work/changing-energy-rules

C.4 The process to date

On 10 October 2024, the Commission published a notice advising of the initiation of the rule making process and consultation in respect of the rule change request.[190] A consultation paper identifying specific issues for consultation was also published. Submissions closed on 7 November 2024. The Commission received 39 submissions as part of the first round of consultation.

To publish a directions paper, we extended timeframes. The directions paper was published on 30 January 2024 and submissions closed on 20 February 2025. The Commission received 41 submissions as part of the second round of consultation.

The Commission considered all issues raised by stakeholders in submissions. Following responses to the directions paper, the draft determination was extended to 11 September to accommodate an independent CBA.

The findings of the independent CBA and the stakeholder responses to the directions paper are discussed and responded to throughout this draft rule determination.

190 This notice was published under sections 95 of the NEL and 251 of the NERL.

D Legal requirements to make a rule

This appendix sets out the relevant legal requirements under the NEL and NERL for the Commission to make a draft rule determination.

D.1 Draft rule determination and draft rules

In accordance with section 99 of the NEL and section 256 of the NERL, the Commission has made this draft rule determination in relation to the rule proposed by Energy Consumers Australia.

The Commission's reasons for making this draft rule determination are set out in chapter 5.

A copy of the draft electricity rule and draft retail rule is attached to and published with this draft determination. Its key features are described in chapters 2,3 and 4.

D.2 Power to make the rule

The Commission is satisfied that the more preferable draft rule falls within the subject matter about which the Commission may make rules.

The draft electricity rule falls within section 34 of the NEL as it relates to:

- the activities of persons (including Registered participants) participating in the national electricity market or involved in the operation of the national electricity system (section 34(1)(a)(iii))
- facilitating and supporting the provision of services to retail customers (section 34(1)(a)(ii)).

The draft retail rule falls within the matters set out in Schedule 1 section 29 to the NEL as it relates to facilitating and supporting the provision of services to retail customers.

The draft rule falls within section 237 of the NERL as it relates to:

- the provision of energy services to customers, including customer retail services and customer connection services (section 237(1)(a)(i))
- the activities of persons involved in the sale and supply of energy to customer (section 237(a)(ii))
- the provision of information about matters associated with the use of smart meters and other related technologies, including the remote de-energisation of premises and control of appliances (section 237(2)(ia)(v)).

D.3 Commission's considerations

In assessing the rule change request the Commission considered:

- its powers under the NEL and NERL to make the draft rule
- the rule change request
- submissions received during first round consultation
- submissions received to the directions paper
- the Commission's analysis as to the ways in which the draft rule will or is likely to contribute to the achievement of the NEO and NERO
- the application of the draft rule to the Northern Territory
- the extent to which the rule is compatible with the development and application of consumer protections for small customers.

There is no relevant Ministerial Council on Energy (MCE) statement of policy principles for this rule change request.[191]

D.4 Making electricity rules in the Northern Territory

The NER, as amended from time to time, apply in the Northern Territory, subject to modifications set out in regulations made under the Northern Territory legislation adopting the NEL.[192] Under those regulations, only certain parts of the NER have been adopted in the Northern Territory.

As the draft electricity rule relates to Chapter 10 of the NER, which applies in the Northern Territory, the Commission is required to assess Northern Territory application issues, described below. In relation to metering, Chapter 7A applies in the Northern Territory instead of Chapter 7.

Test for scope of "national electricity system" in the NEO

Under the NT Act, the Commission must regard the reference in the NEO to the "national electricity system" as a reference to whichever of the following the Commission considers appropriate in the circumstances having regard to the nature, scope or operation of the proposed rule:[193]

1. the national electricity system
2. one or more, or all, of the local electricity systems[194]
3. all of the electricity systems referred to above.

Test for differential rule

Under the NT Act, the Commission may make a differential rule if it is satisfied that, having regard to any relevant MCE statement of policy principles, a differential rule will, or is likely to, better contribute to the achievement of the NEO than a uniform rule.[195] A differential rule is a rule that:

- varies in its term as between:
  - the national electricity systems, and
  - one or more, or all, of the local electricity systems, or
- does not have effect with respect to one or more of those systems

but is not a jurisdictional derogation, participant derogation or rule that has effect with respect to an adoptive jurisdiction for the purpose of s. 91(8) of the NEL.

A uniform rule is a rule that does not vary in its terms between the national electricity system and one or more, or all, of the local electricity systems, and has effect with respect to all of those systems.[196]

The Commission's draft determination in relation to the meaning of the "national electricity system" and whether to make a uniform or differential rule are set out in chapter 5.

191 Under s. 33 of the NEL and s. 73 of the NGL the AEMC must have regard to any relevant MCE statement of policy principles in making a rule. The MCE is referenced in the AEMC's governing legislation and is a legally enduring body comprising the Federal, State and Territory Ministers responsible for energy. On 1 July 2011, the MCE was amalgamated with the Ministerial Council on Mineral and Petroleum Resources. In December 2013, it became known as the Council of Australian Government (COAG) Energy Council. In May 2020, the Energy National Cabinet Reform Committee and the Energy Ministers' Meeting were established to replace the former COAG Energy Council.

192 These regulations under the NT Act are the National Electricity (Northern Territory) (National Uniform Legislation) (Modifications) Regulations 2016

193 Clause 14A of Schedule 1 to the NT Act, inserting section 88(2a) into the NEL as it applies in the Northern Territory.

194 These are specified Northern Territory systems, listed in schedule 2 of the NT Act.

195 Clause 14B of Schedule 1 to the NT Act, inserting section 88AA into the NEL as it applies in the Northern Territory.

196 Clause 14 of Schedule 1 to the NT Act, inserting the definitions of "differential Rule" and "uniform Rule" into section 87 of the NEL as it applies in the Northern Territory.

D.5 Civil penalty provisions and conduct provisions

The Commission cannot create new civil penalty provisions or conduct provisions. However, it may recommend to the Energy Ministers' Meeting that new or existing provisions of the NER be classified as civil penalty provisions or conduct provisions.

The NEL sets out a three-tier penalty structure for civil penalty provisions in the NEL and the NER.[197] A Decision Matrix and Concepts Table,[198] approved by Energy Ministers, provide a decision-making framework that the Commission applies, in consultation with the AER, when assessing whether to recommend that provisions of the NER should be classified as civil penalty provisions, and if so, under which tier.

Subject to consulting with the AER, the Commission proposes to make the following civil penalty recommendations to the Energy Ministers' Meeting in relation to draft electricity retail rule. The Commission is not proposing any civil penalty recommendations for the draft retail rule.

Table D.1: Civil penalty provision recommendations

Rule	Description of rule	Proposed classification	Reason
New Clause 7.3.2(q)	MPs and MDPs who receive a request from an MC for information or assistance, which has been requested of the MC by a retailer who received such a request from an energy ombudsman, must promptly provide the requested information or assistance.	Tier 3	Non-compliance with this provision can be remedied or regularised without causing harm to consumer or market, and therefore, a higher tier is not justified. However, compliance is nonetheless important, which justifies the tier 3. The information held by MPs and MDPs can be important for the resolution of disputes and customer complaints, but retailers and energy ombudsman have no pathway to access this information from MPs and MDPs under the Rules and current

197 Further information is available at https://www.aemc.gov.au/regulation/energy-rules/civil-penalty-tools

198 The Decision Matrix and Concepts Table is available at: https://web.archive.org.au/awa/20210603104757mp_/https://energyministers.gov.au/sites/prod.energycouncil/files/publications/documents/Final%20-%20Civil%20Penalties%20Decision%20Matrix%20and%20Concepts%20Table_Jan%202021.pdf

Rule	Description of rule	Proposed classification	Reason
			practices are preventing this information from being provided. It is therefore important that MDPs and MPs treat these requests seriously and comply with such requests promptly.
New Clause 7.15.7(f)	An MC can only charge a retailer for facilitating access to real-time data once for a connection point and only during the real-time data transition period.	Tier 2	Non-compliance with this provision would result in a failure to comply with rules regarding fees and charges, which requires a tier 2 penalty. It is important that facilitating access to real-time data is only charged for once. Once a meter at a given premises has real-time data functionality, there are no ongoing or additional costs. Therefore, an MC or retailer cannot seek to charge again, for example, if the customer at the premises churns. Compliance with this requirement is essential for the successful implementation of the rule and for consumer trust.

Where the draft electricity rule amends provisions that are currently classified as civil penalty provisions, the Commission does not propose to recommend to the Energy Ministers' Meeting any changes to the classification of those provisions.

Abbreviations and defined terms

AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
App	Application
BAU	Business-as-usual
CDR	Consumer Data Right
CER	Consumer energy resources
Commission	See AEMC
CT	Current transformer
DEIP	Distributed energy integration program
DER	Distributed energy resources
DNSP	Distribution network service provider
DOE	Dynamic operating envelope
ECA	Energy Consumers Australia
EU	European Union
EV	Electric vehicle
HEMS	Home energy management system
IEC	Information exchange committee
MC	Metering coordinator
MDP	Metering data provider
Min spec	Minimum service specification
MP	Metering Provider
NEL	National Electricity Law
NEO	National Electricity Objective
NER	National Electricity Rules
NERL	National Energy Retail Law
NERO	National Energy Retail Objective
NERR	National Energy Retail Rules
NGL	National Gas Law
NGO	National Gas Objective
NGR	National Gas Rules
NT Act	*National Electricity (Northern Territory) (National Uniform Legislation) Act 2015*
Proponent	The individual / organisation who submitted the rule change request to the Commission
VPP	Virtual Power Plant