AUSTRALIAN ENERGY MARKET COMMISSION



# RULE

### **Rule determination**

National Electricity Amendment (Unlocking CER benefits through flexible trading) Rule 2024

National Energy Retail Amendment (Unlocking CER benefits through flexible trading) Rule 2024

Proponent AEMO



### Inquiries

Australian Energy Market Commission Level 15, 60 Castlereagh Street Sydney NSW 2000

E aemc@aemc.gov.au

T (02) 8296 7800

Reference: ERC0346

### 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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### Summary

- 1 The Australian Energy Market Commission (AEMC) has made more preferable electricity and retail rules for the Unlocking CER benefits through flexible trading rule change request submitted by the Australian Energy Market Operator (AEMO). This rule change proposal was developed as part of the Energy Security Board's (ESB) consumer energy resources (CER) implementation plan.
- 2 The AEMC's role is to make sure the energy system delivers for all consumers. We want consumers to get the benefits they expect from their CER assets, while ensuring that other consumers don't face negative consequences like bearing the cost of expensive network upgrades. The Commission is committed to pursuing reforms that pave the way for the innovation required to meet this challenge, knowing that if we do nothing, all consumers will face higher costs.
- 3 The Commission considers that this rule change is an important enabler in the context of the <u>National CER Roadmap</u>. These rules make a series of incremental changes that, alongside other reforms, will unlock substantial benefits for consumers and the system as a whole.
- 4 The rules will enable three key arrangements:
  - Large customers will be able to engage multiple energy service providers at their premises to manage and obtain more value from their CER.
  - Energy service providers for small and large customers will be able to separate and manage 'flexible' CER from 'passive' loads in the energy market - leading to innovative products and services for consumers.
  - Market participants will be able to use in-built measurement capability in technology such as electric vehicle (EV) chargers and streetlights - to enable innovative and essential products and services at a lower cost.
- 5 These arrangements will also provide a strong foundation for emerging and innovative CER products and services to be delivered and integrated into the National Electricity Market (NEM). Together, these arrangements will contribute to a more reliable, lower emissions, and lower-cost energy system for all consumers.

### CER and DER are growing and will play a critical role in the NEM transition

- 6 Australian households and businesses are embracing CER at a growing rate. More than three million households and businesses have solar panels and every second household is expected to have them by 2040. More than fifty thousand small-scale battery systems have been installed in the past seven years, and twenty-two million purchases of electric vehicles are expected to be made by 2050.
- 7 People are also using CER in the form of 'smart devices' such as hot water systems at home or at work, and controlling or programming their use to manage energy consumption through behaviours, timers and dedicated apps. Distributed energy resources (DER), such as neighbourhood batteries and Virtual Power Plants (VPPs) are also a growing part of the power system.
- 8 Government commitments to achieve net zero emissions by 2050 are accelerating this shift and CER and DER will play a critically important role in Australia's energy transformation, helping to reduce overall system costs, improve reliability and achieve a secure, low-emission energy supply for all.

- 9 If these resources are integrated well, the power system will operate more smoothly, and consumers and industry will enjoy the benefits of cheaper supply. A range of studies have estimated the net benefit of effective integration and coordination of CER to be between \$1 billion and \$6.3 billion by 2030-2040 (CSIRO and Baringa consulting, 2019; ARENA, NERA consulting, 2022). The ENA Electricity Transformation Roadmap also highlighted that \$16 billion in network infrastructure investment would be avoided by CER and DER orchestration.
- 10 Benefits for consumers with CER technologies include:
  - flexibility in how and when they use energy so they can save money within their own home or business
  - having the option to allow their CER to be used in the wider power system and to be rewarded
  - contributing to the achievement of a net zero energy system.

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- Crucially, those who do not have CER technologies like solar, batteries and smart hot water systems would also enjoy direct and flow-on benefits, such as:
  - flexibility to use energy more efficiently and save money on bills
  - · benefiting from the lower system costs that integration of CER can deliver
  - progress towards net zero emissions as more CER technologies contribute to a cleaner system.

### Market bodies are driving a series of interrelated reforms

- 12 To support this transformation, market bodies are driving a series of interrelated reforms. A CER Taskforce convened by energy ministers has developed a National CER Roadmap that defines and will help to drive the integration actions needed.
- As part of this work, the AEMC is driving reforms and reviews that are critical building blocks to integrating CER into the power system and paving the way for innovation in the market. For example, our 'Accelerating smart meter deployment' rule change is crucial to providing consumers with the tools to manage their CER to save money' and allowing CER to be used by the energy system. The 'Electricity pricing for a consumer-driven future' review is broad, forward-looking, and will address the important role that electricity pricing, products, and services will play in supporting the diverse needs of customers, including delivering the consumer energy resources (CER) necessary for the energy transition.
- 14 The <u>'Integrating price-responsive resources into the NEM' (IPRR) rule change</u> is closely related to this rule change. The IPRR rule change aims to enable greater integration of unscheduled price-responsive resources, such as community batteries and VPPs, in the wholesale market. It is expected that the arrangements under this rule change will make it easier for energy service providers to participate in dispatch under the IPRR rule change. This is because it would reduce the need for participants to forecast passive load and conformance and compliance requirements could be easier to meet at separate settlement points.
- 15 Further detail about this interaction is provided in chapter 4. The AEMC also recognises that our work interacts with other reforms that are critical to realising the value of flexible CER, such as data sharing arrangements, CER technology standards, and the review of energy consumer protections.

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# This rule is an important enabler in the roadmap to CER integration in the NEM

16 This rule change makes a series of incremental changes that, alongside other reforms, will unlock substantial benefits for consumers and the system as a whole. These rules strike a balance by progressing arrangements that deliver a clear benefit to consumers and the system at relatively low cost, while setting building blocks in areas where further work needs to occur. It is a step in creating more options for consumers in households and businesses to be able to use and manage flexible loads.

### 17 As noted, these rules will create arrangements for:

- Large customers to choose multiple energy service providers for their premises using a fit-for-purpose market framework, to manage and obtain more value from their CER.
- Energy service providers (i.e. retailers) for small and large customers to separate and manage 'flexible' CER (e.g. rooftop solar, batteries, EV) from 'passive' consumer loads (e.g. lights, fridges) in the energy market.
- Market participants to use in-built measurement capability in technology such as EV chargers and streetlights, to provide innovative and essential products and services at a lower cost.
- 18 These arrangements will be voluntary, leverage existing market systems, and will not need to be taken up by all consumers for the benefits to outweigh the relatively low cost of implementation. Energy service providers and consumers will be able to take up these arrangements when and how they see fit. This means that the cost of implementation of this rule change will scale in step with the level of take-up and benefits that accrue from the proposed arrangements.
- In practice, these rules will make it easier for energy service providers to deliver products and services for CER, by making it possible to separately meter passive and flexible loads and use in-built technology for metering CER and other technology. This will make it easier for a retailer to offer a household an EV charger product that has an in-built measurement capability, a dedicated tariff, and is subject to energy consumer protections. It will make it easier for Small Resource Aggregators (SRAs) to provide services to commercial and industrial customers and the public sector (e.g. hospitals and schools). It will also make it easier for participants to deploy public EV chargers, which will provide consumers with more choice and contribute to critical charging infrastructure needed to support the uptake of EVs.
- 20 The benefits of this rule change will also be amplified as other reforms progress. For example, the ability to separately meter passive and flexible loads will make it easier for energy service providers to use the mechanisms envisaged under the IPRR rule change to participate in dispatch with unscheduled price-responsive resources. The arrangements are also likely to make it easier for networks and retailers to offer dedicated tariffs for flexible resources such as EV chargers, which will enable consumers to make the most of their resources and have flow-on benefits for the energy system.
- 21 The Commission considers that these rules also provide a foundation for emerging and innovative CER products and services to be deployed in the NEM. In the future, the ability to have one or more settlement points at a single connection point could make it easier for peer-to-peer electricity trading to move from virtual platforms to being integrated into the NEM, and for floating or roaming National Meter Identifier (NMIs) to be deployed, which could be used to offer a consumer one bill capturing EV charging consumption across multiple locations. The Commission will continue to take into account arrangements that encourage innovative product development as we work with counterparts to deliver actions under the National CER Roadmap.

### This rule change does three things

# Creates an enduring framework for flexible trading with multiple energy service providers at large customers premises

- 22 This rule change creates a new framework that enables large customers to separate their flexible and passive resources and engage multiple energy service providers to manage these resources. For these customers, such as manufacturers, other commercial operators, and hospitals, this means the ability to take up different product and service offers for their CER. For industry, it means consumer resources and load can better participate in the wholesale energy and ancillary services markets.
- 23 Currently, large customers can engage multiple energy service providers by using the embedded network framework or by establishing two connection points to the distribution network to obtain a second NMI. The Commission notes that the embedded network framework was not set up for this purpose.
- 24 These rules will provide a more appropriate and enduring framework in the NER for these activities. They remove the need for large customers and their agents (such as SRAs) to use an embedded network and navigate the Network Exemptions Guideline, or obtain a second connection to the distribution network to get a second NMI.
- 25 These arrangements will provide large customers and their agents with an easier path to separate their passive and flexible loads using secondary settlement points (SSPs), meter their flexible resources using in-built measurement capability, and derive value from their flexible resources through wholesale and ancillary services markets.
- 26 While this framework will be voluntary, the Commission expects that by lowering barriers to entry compared to existing options and using existing market system arrangements, customers and agents will transition to and take up this framework. The AEMC notes that the AER is in the process of reviewing its Network Exemption Guideline and recognises that the framework created by these rules is a more appropriate avenue for customers to obtain additional NMIs and engage multiple service providers than the embedded network framework.
- 27 More detail on these arrangements and stakeholder feedback on these arrangements are provided in chapter 3.

# Creates opportunities to unlock the value of flexible CER for small customers (households and small businesses)

- 28 This rule change is an important first step in creating more options for consumers in households and small businesses to be able to use and manage flexible loads as they choose.
- 29 The final rules enable 'flexible' CER loads such as EV chargers and batteries to be separately metered and visible in the energy market from 'passive' consumer loads, such as lights and fridges. It also introduces more flexible metering arrangements to allow for the measurement and management of energy use at a lower cost. These arrangements will be voluntary.
- 30 Specifically, these rules enable:
  - the establishment of SSPs at a small customer premises, removing the need to establish a second physical connection to the distribution network
  - in-built measurement capability in technology such as batteries and EV chargers to be used, removing the need to install a separate meter to the device.

- 31 For consumers in households and businesses, this will mean more products and service options that suit their needs and preferences and get the most value out of their CER. For energy service providers, this will make it easier to have visibility of CER and use these resources to participate in the wholesale market, such as through VPPs. This gives consumers the option to use their CER in the grid and be rewarded for it.
- 32 Forecasts indicate that twenty-two million purchases of electric vehicles are expected to be made by 2050. We know that consumers will want to use their EVs and EV chargers in different ways including to derive value where they can. This rule change will make it easier for a retailer to offer a household an electric vehicle (EV) charger product that has an in-built measurement capability and a dedicated tariff, where the energy flowing through the EV charger is visible and if operating in vehicle-to-grid mode could be traded in the wholesale market. This means that the retailer will be able to extract more value from the EV charger for their consumer and will be able to provide the consumer with separate energy usage and billing information for the EV charger - distinct from the rest of the premises.
- 33 Looking forward, as other reforms progress, the Commission expects that these rules will play a role in unlocking additional value and benefits for consumers and the system from participation in market dispatch through VPPs and CER products and services that provide greater benefit as a result of cost-reflective pricing arrangements. The IPRR rule change and 'Electricity pricing for a consumer-driven future' review will help us to realise these additional benefits.
- 34 As noted above, while the Commission is committed to pursuing reforms that encourage innovation, the Commission has determined not to progress the option of multiple Financially Responsible Market Participants (FRMPs) at small customer premises at this time. It considers that further work needs to be done on the National Energy Customer Framework to identify arrangements for future energy services that both protect consumers and enable innovation and competition. The Commission is also aware that enabling multiple FRMPs at this time has the potential to create or exacerbate issues including the scope of the role of Metering Coordinators and implementation of dynamic operating envelopes. These issues need to be considered holistically through other processes. The Commission will continue to work with parties to look at options to trial multiple FRMPs for small customers and is open to a rule change request on this option once other reforms have progressed. The Commission notes that the role of Metering Coordinators will be considered as part of the forthcoming 'Empowering consumers with real-time data' rule change.
- 35 More detail on these arrangements and stakeholder feedback on these arrangements are provided in chapter 4.

### Enables the measurement of energy flows using in-built technology

- 36 This rule change will allow market participants to use in-built measurement capability in technology such as EV chargers and streetlights to provide innovative and essential products and services at a lower cost.
- 37 It will do this by creating three new meter types with lower minimum specifications to enable technology such as EV chargers and streetlights with in-built measurement capability to be used for settlement and billing. By removing the need to install a separate meter to measure energy at devices, these more flexible metering arrangements will allow for the measurement and management of energy use at a lower cost.

- 38 The main features of the new meter types are:
  - They will be voluntary to use.
  - The meter types will have lower minimum specifications than type 4 meters.
  - The in-built measurement capability in the technology will require National Measurement Institute approval.
- 39 These arrangements will enable a range of use cases that will benefit consumers those with and without CER. They will make it easier to separately meter CER such as EV chargers in households and businesses and therefore easier to offer products and services for these devices.
- 40 Removing the need to install a separate meter will also encourage the deployment of public EV chargers, providing consumers with more choice. These avoided metering costs will also incentivise the uptake of smart devices for currently unmetered loads such as streetlights, which will lead to lower energy costs for consumers. Energeia's analysis indicates that this rule change could deliver up to \$100m in benefits over 20 years as a result of reduced metering installation, maintenance, and wholesale costs, and reduced emissions from smart streetlights, as well as avoided metering costs for public EV chargers.
- 41 More detail on these arrangements and stakeholder feedback on these arrangements are provided in chapter 5.

### The final rules will promote the national energy objectives

- 42 In making our more preferable rules, we have considered the national electricity objective (NEO) and the national energy retail objective (NERO) by applying five assessment criteria that we outlined in the Directions Paper. We consider the final rules would meet the assessment criteria in these ways:
- 43 Outcomes for consumers: For consumers, the rules will:
  - Support small and large consumers to generate, consume, store, and trade energy according to their preferences, to unlock more value from their CER.
  - Enable the measurement of energy at public assets such as streetlights, to support a reduction in energy costs passed on to consumers (i.e. through council rates).
  - Create arrangements that will deliver additional benefits to consumers in the future, as other reforms progress, such as the IPRR rule change, Electricity pricing for a consumer-driven future review, and officials work on review of the National Energy Customer Framework under the CER roadmap.
- 44 Increasing innovation and flexibility: The rules will:
  - Support innovation and flexibility in the provision of energy products and services for consumers who are looking to use their CER in different ways, by enabling flexible loads to be separate from passive loads at premises.
  - Enable more flexible metering arrangements at SSPs, which will enable service providers to offer lower cost and more innovative products and services to small and large customers.
  - Enable more flexible metering arrangements at primary connection points for technology such as streetlights and public EV chargers, which will promote innovation in devices with in-built measurement capability.

### 45 Principles of market efficiency, in particular, competition: The rules will:

- Support competition in the energy retail sector by making it easier to separate, have visibility
  of, and manage CER through SSPs and flexible metering arrangements. This will encourage
  market participants to develop and offer different products and services to assist residential
  customers and commercial and industrial customers to maximise the benefit from their CER.
- Reduce transaction costs for large customers by making it easier to obtain additional NMIs and engage multiple service providers at premises to manage and extract value from CER (i.e. instead of creating an embedded network and being subject to the Network exemptions guideline).

### 46 Impacts on safety, security, and reliability: The rules will:

- Contribute to system reliability by supporting the visibility and integration of flexible CER into the system.
- Help to maintain system safety and security by ensuring that options enabled under the rule change would be implemented in a manner that is consistent with operational and technical requirements (i.e. as specified in AEMO procedures and in the National Measurement Act).
- **47 Implementation costs and considerations:** The rules have been developed with the aim of minimising costs for consumers and market participants, while creating new opportunities to separate, manage, and unlock more value from CER. The interaction with other reforms under the National CER Roadmap have also been considered. The arrangements established by these rules will be voluntary and will leverage existing market systems, to enable service providers and consumers to take up these arrangements when and how they see fit. As a result, upfront system costs associated with this rule change will be relatively small.
- **48 Emissions reductions:** The rules will support emissions reductions by supporting energy efficiency of public assets such as streetlights (reducing emissions through reduced energy consumption). Energeia's analysis indicates that the rule change could deliver up to 262,000 tonnes of CO2 emissions reductions over 20 years, as a result of the uptake of smart streetlights. The Commission also notes that this rule change may contribute to emissions reductions as a result of the interaction with the IPRR rule change. Modelling undertaken for the IPRR rule change indicates that CER participating in dispatch under the mechanism envisaged under IPRR will reduce emissions and that this rule change will make it easier for CER to participate in dispatch.

# The Commission has considered regulatory impacts and cost-benefit analysis in making this determination

- 49 In making the final determination, the Commission has considered the regulatory impact of the rule change arrangements and engaged Energeia to undertake a comprehensive cost-benefit analysis of the rule change.
- 50 Energeia's analysis demonstrates that this rule change could deliver benefits to residential and large consumers taking up CER and the broader consumer base, at relatively low cost to the system. While this cost-benefit analysis is an important consideration, the Commission recognises that these rules are an enabler and will work alongside other reforms to unlock substantial benefits for consumers and the system.
- 51 Energeia's key findings are:
  - The system costs associated with this rule change are relatively small and for the benefits to match the associated implementation costs, only 16 percent of CER devices will need to participate at SSPs.

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- The majority of these costs will be borne by consumers who take up the arrangements rather than the broader consumer base.
- The rule change will deliver benefits to consumers who participate in CER flexibility and to consumers more broadly.
  - For small and large customers participating with flexible CER, the rule change will deliver benefits through reduced metering costs as a result of using an in-built meter instead of a separate metering installation. We note that Energeia's analysis did not include the benefits from reduced barriers to entry, including greater choice, lower prices, and innovation.
  - For consumers who do not have CER, this rule change could deliver benefits through lower wholesale and FCAS costs, as a result of CER devices participating in dispatch through the mechanism envisaged under the IPRR rule change and by networks offering cost-reflective pricing.
  - For arrangements related to smart streetlights and kerbside EV chargers, the rule change could deliver up to \$100m in benefits over 20 years by enabling the measurement of energy flows using in-built measurement capability. Benefits would be derived from reduced metering installation costs, reduced maintenance costs, reduced wholesale costs due to more efficient energy consumption, and reduced emissions.
- In the future, greater benefits could be achieved from SSPs through reduced barriers to flexible CER being able to be used for network services, if networks apply cost-reflective prices for devices at these points, and if the market ancillary services specification (MASS) is altered to enable CER devices to access FCAS markets. The additional benefits associated with these activities are estimated to be \$343 per 10 kWh battery per year for small customers and \$4,675 per 150 kWh battery per year for large customers.
- 52 A summary of the regulatory impact analysis and Energeia's findings is at chapter 6. Energeia's reports are published with the determination (Benefit Analysis of Load-Flexibility from CER: Final Report, 15 August 2024; Measuring Energy Flows from In-Built Technology (Streetlights, EV Chargers, Other Street Furniture) Analysis - Final Report, 15 August 2024).

### Implementation timing

- 53 A range of procedures and guideline changes will need to be undertaken by AEMO and the AER to implement this rule change. These procedures and guidelines will specify operational and technical requirements, as well as transitional arrangements, to ensure that the rules operate as intended.
- 54 In determining implementation timing for the rules, the Commission has taken into account stakeholder submission feedback, AEMO's Draft High Level Implementation Assessment, alignment with AEMO's work plan, the urgency of the reforms, and time required for market participants to make system changes.
- 55 Taking these into account, the Commission has determined that the majority of the rules will be implemented by **1 November 2026**. Arrangements related to in-built metering at primary connection points in technology such as streetlights and EV chargers will be implemented earlier, by **31 May 2026**, recognising the readiness of participants to take up the arrangements and alignment with AEMO's work plan.
- 56 The rules provide that AEMO's procedure changes must be finalised by 30 September 2025 and that the AER makes changes to relevant guidelines by 1 November 2026, to enable participants to be ready to proceed in accordance with these implementation dates.



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### **1** The Commission has made a final determination

The Australian Energy Market Commission (AEMC or Commission) has made a final determination to make more preferable final electricity and retail rules (final rules) in response to the rule change request submitted by the Australian Energy Market Operator (AEMO). The AEMO rule change proposal was developed as part of the Energy Security Board's (ESB) post 2025 NEM recommendations and consumer energy resources (CER) implementation plan. The final determination also addresses additional opportunities raised by stakeholders during the consultation process.

The final rules seek to unlock substantial benefits from flexible CER for consumers and the system as a whole. The rules will do this by making it easier for energy service providers to offer different products and services to consumers to reward and unlock the value of their CER. They also aim to facilitate better integration of flexible CER into the power system to deliver a more reliable and secure energy system that will benefit all consumers.

In making its final decision, the Commission has considered stakeholder feedback, Energeia's cost-benefit analysis, and the national electricity objective (NEO) and national energy retail objective (NERO). The majority of the rules will be implemented by 1 November 2026. Arrangements related to in-built metering at primary connection points for assets like street lighting and public EV chargers will be implemented earlier - by 31 May 2025 - recognising the readiness of participants to take up the arrangements and alignment with AEMO's work plan.

The final determination sets out the following:

- Chapter one (this chapter) provides an overview of the final rules and the inputs that we have considered in forming the final rules, including stakeholder feedback and regulatory impact analysis.
- Chapter 2 explains our assessment framework and summarises why the Commission considers the final rules will contribute to achieving the energy objectives.
- Chapter 3 sets out the arrangements to introduce flexible trading with multiple energy service providers for large customers.
- Chapter 4 sets out the arrangements for unlocking the value of flexible CER for small customers.
- · Chapter 5 sets out the arrangements for measuring energy flows from in-built technology
- Chapter 6 summarises the regulatory impact analysis for the final rules, including Energeia's cost-benefit analysis.
- Chapter 7 outlines implementation considerations.

There is also a set of appendices:

- A- Rule making process
- B- Regulatory impact analysis
- C- Interaction with the Network Exemption Guideline<sup>1</sup>
- · D- Legal requirements to make the final rules
- E- Summary of the final rules and changes between the draft and final rules
- Defined terms and abbreviations.

<sup>1</sup> The Network Exemption Guideline provides exemptions from the obligation to register as a Network Service Provider. AER, Electricity Network Service Provider – Registration Exemption Guideline, Version 6, March, 2018.

# 1.1 Our rules provide new arrangements supporting the use and integration of flexible CER in the NEM

The Commission considers that this rule change is an important enabler in the context of the <u>National CER Roadmap</u>. These rules make a series of incremental changes that, alongside other reforms, will unlock substantial benefits for consumers and the system as a whole.

These arrangements will also provide a strong foundation for emerging and innovative CER products and services to be delivered and integrated into the National Electricity Market (NEM). Together, these arrangements will contribute to a more reliable, lower emissions, and lower-cost energy system for all consumers.

The final rules cover these three areas:

- flexible trading with multiple energy service providers at large customer premises.<sup>2</sup>
- opportunities to unlock the value of flexible CER for small customers
- measuring energy flows from in-built technology (streetlights, EV chargers, other street furniture)

### 1.1.1 Flexible trading with multiple energy service providers at large customer premises

The rules create a new framework to enable large customers to engage multiple energy service providers at their premises.<sup>3</sup> These arrangements will provide large customers and their agents with an easier path to separate their passive and flexible loads, meter their flexible resources using in-built measurement capability, and derive value from their flexible resources through wholesale and ancillary services markets. For example, it will make it easier for SRAs to provide services to commercial and industrial customers in sectors such as manufacturing, refrigeration, and the public sector (e.g. hospitals and schools).

These rules will provide a more appropriate and enduring framework in the National Electricity Rules (NER) for these activities. They remove the need for large customers and their agents (such as SRAs) to use an embedded network and navigate the Network Exemptions Guideline, or obtain a second connection to the distribution network to get a second National Meter Identifier (NMI).

While this framework will be voluntary, the Commission expects that by lowering barriers to entry compared to existing options and using existing market and system arrangements, customers and agents will transition to and take up this framework. The final rules also seek to minimise implementation costs for market participants and market system costs by utilising existing system arrangements.

The Commission notes that the AER is in the process of reviewing its Network Exemption Guideline and recognises that the framework created by these rules is a more appropriate avenue for customers to obtain secondary settlement points (SSPs) and engage multiple service providers than the existing embedded network framework.

Refer to chapter 3 for a detailed description of these arrangements.

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<sup>2</sup> Flexible trading of CER refers to activities where consumers can take up different product and service offers for their CER. For the industry, it means CER can be used more easily in the wholesale energy and ancillary services market and for network services.

<sup>3</sup> For the purposes of this determination, an energy service provider can be for example an integrated resource provider, market customer, small resource aggregator (SRA) and/or retailer.

### 1.1.2 Opportunities to unlock the value of flexible CER for small customers

The final rules enable 'flexible' CER loads such as EV chargers and batteries to be separately metered and visible in the energy market from 'passive' consumer loads, such as lights and fridges. It also introduces more flexible metering arrangements to allow for the measurement and management of energy use at a lower cost.

Specifically, the rules enable:

- · the establishment of SSPs at small customer premises
- in-built measurement capability in technology such as batteries and EV chargers to be used for settlement and billing, removing the need to install a separate meter to the device.

These arrangements provide consumers with more options for how they manage and unlock value from their CER assets. They will make it easier and lower costs for energy service providers (such as retailers) to have better visibility of the value of flexible CER and use these resources to participate in the wholesale market via virtual power plants (VPPs), providing network services, and offering different products to small customers.

For example, the arrangements will make it easier for a retailer to offer a household an EV charger product that has an in-built measurement capability and a dedicated tariff, where the energy flowing through the EV charger is visible and if operating in vehicle-to-grid mode could be traded in the wholesale market. This means that the retailer will be able to extract more value from the EV charger on behalf of their customer and will be able to provide the customer with separate energy usage and billing information for the EV charger.

The Commission notes that this rule change will unlock additional benefits in combination with other reforms as a result of the participation of CER in dispatch through the mechanism envisaged under the IPRR rule change,<sup>4</sup> and the provision of CER products and services as a result of cost-reflective pricing arrangements.

The Commission notes that it has determined not to progress the option of having multiple financially responsible market participants (FRMPs) at small customer premises at this time. It considers that further work needs to be done on the National Energy Customer Framework (NECF) to allow for future energy services that both protect consumers and enable innovation and competition. The Commission notes that the review of the NECF is currently with Energy Officials. The Commission is also aware that enabling multiple FRMPs for small customers at this time would have the potential to create or exacerbate issues, including with the scope of the role of Metering Coordinators (MCs) and implementation of dynamic operating envelopes (DOEs). These issues will be considered as part of the forthcoming 'Empowering consumers with real-time data' rule change.

Refer to chapter 4 for a detailed description of the arrangements for small customers.

<sup>4</sup> Draft rule determination, Integrating price-responsive resources into the NEM, 25 July 2024, pp. 21, 52.

# 1.1.3 Measuring energy flows from in-built technology (e.g. streetlights, EV chargers, other street furniture)

The final rules allow market participants to use in-built measurement capability in technology such as EV chargers and streetlights to provide innovative and essential products and services at a lower cost.

It will do this by creating three new meter types with lower minimum specifications to enable technology such as EV chargers and streetlights with in-built measurement capability to be used for settlement and billing. By removing the need to install a separate meter to measure energy at devices, these more flexible metering arrangements will allow for the measurement and management of energy use at a lower cost.

The main features of the new meter types are:

- they will be voluntary to use
- the meter types will have lower minimum specifications than type 4 meters
- the in-built measurement capability in the technology will require National Measurement Institute approval.

These metering arrangements will make it easier to separately meter CER such as EV chargers, separately meter and therefore deploy public EV chargers, and incentivise the uptake of smart devices for currently unmetered loads such as streetlights, which will lead to lower energy costs for consumers and reduce emissions.

Energeia's analysis indicates that this rule change could deliver up to \$78 million in benefits over 20 years for smart streetlights as a result of avoided metering installation costs, reduced maintenance costs from using dimming technology, reduced wholesale costs from using dimming technology, and reduced emissions from using dimming technology. It could also deliver up to \$22 million in benefits for public EV chargers as a result of avoided metering costs.

Refer to chapter 5 for a detailed description of the final arrangements.

# 1.2 Our regulatory impact analysis and stakeholder feedback have informed our determination

The Commission's final decision has been informed by regulatory impact analysis, Energeia's costbenefit analysis, and stakeholder submissions in response to the <u>draft determination</u>, <u>directions</u> <u>paper</u> and <u>consultation paper</u>. The decision has also been informed by discussions through a range of workshops and direct consultation with industry participants and consumer groups.

Further detail on the rule-making process is set out in appendix A.

### 1.2.1 Regulatory impact analysis

The Commission has regulatory impact analysis using qualitative and quantitative methodologies to identify stakeholders impacted by the rule change, assess the benefits and costs of the rule change, and assess the rule change against the Commission's criteria outlined in Chapter two.

As part of this analysis, we engaged Energeia to undertake a cost-benefit analysis of the rule change. As part of its decision, the Commission has adopted a least-cost approach to all aspects of this rule change, recognising that this rule change is an important but incremental step in the context of the <u>National CER Roadmap</u>.

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We have considered options for this rule change on the basis that they:

- are voluntary for small and large consumers
- impose low costs on consumers and market participants
- require achievable uptake in order to deliver supply chain benefits.

Broadly, Energeia's analysis found that this rule change will deliver benefits to small and large customers at relatively low cost to the system and broader consumer base, and will deliver significant benefits as a result of more efficient street lighting and avoided metering for public EV chargers. A detailed summary of Energeia's findings is provided in chapter 6 and in Energeia's final reports published alongside this final determination.<sup>5</sup>

## 1.2.2 Stakeholder feedback to the draft determination, directions paper, workshops, and other consultation

Throughout the rule change process, the Commission received extensive feedback from interested and affected stakeholders, including consumer groups, retailers, distributed network service providers (DNSP), CER manufacturers, metering parties, and industry bodies. The Commission has carefully considered this feedback in making the final rules, as detailed in Chapters three to five.

The majority of stakeholders expressed strong support for the goal of CER integration, recognised the benefits of integration to consumers and the system as a whole, and emphasised that a number of reforms are required to reach this goal. Stakeholders expressed varied views on the proposed arrangements as a means of creating opportunities to unlock the value of and support the integration of CER in the system.

**In relation to the proposed arrangements for large customers** many stakeholders reiterated their support for the flexible trading framework for large customers, on the basis that it will encourage competition, increase consumer choice, and offer a more appropriate, enduring, and less complex framework to enable a second NMI compared to the embedded network framework.<sup>6</sup>

Some stakeholders reiterated concerns regarding the complexity that allowing multiple FRMPs introduces for retailers and DNSPs, including exposure to wholesale market risk, arrangements between FRMPs at a premises, managing compliance with DOEs, managing the allocation of tariffs to the primary FRMP, and unpredictability arising from switching of loads.<sup>7</sup> Some also noted that consumers can obtain value from their CER through a single retailer and through small resource aggregators using embedded networks.<sup>8</sup>

**In relation to the proposed arrangements for small customers,** some stakeholders noted that the ability to separately meter and manage flexible loads would enhance consumer benefit from CER and optimise the value of CER for the market and networks,<sup>9</sup> and that allowing in-built metering for CER could provide significant opportunities for retail models for EV charging services.<sup>10</sup>

Other stakeholders expressed reservations, noting that the predicted benefits can be achieved through existing arrangements, such as VPPs, home energy management systems (HEMS), and

<sup>5</sup> Benefit Analysis of Load-Flexibility from Consumer Energy Resources: Final Cost-Benefit Analysis, Final Report, 15 August 2024; Measuring Energy Flows from In-Built Technology (Streetlights, EV Chargers, Other Street Furniture) Analysis - Final Report, 15 August 2024.

<sup>6</sup> Submissions to draft determination: AER, p. 2, AGL, p. 5, Alinta Energy, p. 1, Clean Energy Council, p. 1, Electric Vehicle Council, p. 2, Enel-X, p. 2, EUAA, p. 1, Flow Power, p. 2, Landis & Gyr, p. 1, Master Electricians Australia, p. 1, PIAC, pp. 2-3, Tesla, p. 2.

Submissions to draft determination: Citipower, Powercor & United Energy, p. 1, Endeavour Energy, p. 6, EnergyAustralia, pp. 2-8, Energy Queensland, p. 4, ENGIE, pp. 3-4, Origin Energy, pp. 1-2, Red Energy & Lumo Energy, p. 2, Shell Energy, p. 1, SA Power Networks, p. 2.

<sup>8</sup> Submissions to draft determination: Origin Energy, p. 1, Red Energy & Lumo Energy, pp. 4-5, Shell Energy, p. 3.

<sup>9</sup> Submissions to draft determination: Clean Energy Council, p. 1, Evoenergy, p. 1, Master Electricians Australia, p. 2, Smart Energy Council, pp. 1-2.

<sup>10</sup> Submission to draft determination: Tesla, p. 2.

time-of-use tariffs, and that the costs of implementation could outweigh the benefits of the arrangements.<sup>11</sup> Some also expressed concern that the arrangements could impede consumers' ability to self-consume.<sup>12</sup>

A number of stakeholders emphasised the need to ensure that there are adequate consumer protections and consumer awareness in relation to products and services offered at SSPs.<sup>13</sup> Most supported maintaining one FRMP at small customer premises, but some noted that enabling multiple FRMPs for small customers would support competition and consumer choice for CER products and services and lead to network reliability benefits through improved visibility of subloads.<sup>14</sup> Some stakeholders also noted concerns regarding the potential for the rule change to exacerbate existing issues regarding MC anti-competitive behaviour and how the arrangements will operate in Victoria.<sup>15</sup>

In relation to the proposed arrangements for measuring energy flows using in-built technology, there was universal support with stakeholders pointing to benefits including improved energy efficiency, cost reductions, settlement accuracy, and better allocation of unaccounted-for energy.<sup>16</sup> Some noted that these arrangements could incentivise the adoption of smart street lighting and EV chargers and support innovation for in-built metering technology in assets such as CCTV, smart city sensors, and NBN cabinets.<sup>17</sup>

Several stakeholders provided feedback on technical arrangements for the proposed new meter types, such as flow limits,<sup>18</sup> and testing and inspection arrangements.<sup>19</sup> Some networks expressed concern about the use of third party Metering Providers (MPs) installing type 8 and 9 meters on DNSP assets,<sup>20</sup> and expressed a preference for performing metering roles for streetlights rather than allowing the roles to be contestable.<sup>21</sup>

The Commission's response to this feedback is addressed in Chapters three to five.

### 1.3 Our determination supports the broader goals of the CER Roadmap

The Commission considers that this rule change is an important enabler in the context of the <u>National CER Roadmap</u>. As noted, these rules make a series of incremental changes that, alongside other reforms, will unlock substantial benefits for consumers and the system as a whole.

<sup>11</sup> Submissions to draft determination: AGL. p. 2, Australian Energy Council, p. 1, Endeavour Energy, p. 1, EnergyAustralia, p. 2, Energy Networks Australia, p. 2, Energy Queensland, p. 1, ENGIE, p. 3, enX, pp. 1-3, Evergen, p. 1, Origin Energy, p. 2, Red Energy and Lumo Energy, p. 2.

<sup>12</sup> Submissions to draft determination: Evergen, p. 1, enX, p. 3.

<sup>13</sup> Submissions to draft determination: Ausgrid, p. 2, Clean Energy Council, p. 2, Energy Consumers Australia, pp. 3-4, Energy & Water Ombudsman of NSW, Queensland, South Australia and Victoria, pp. 2-8, Energy Queensland, p. 5, Essential Energy. p.2, Evergen, p. 2, Nexa Advisory, p. 4, Origin Energy, p. 2.

<sup>14</sup> Submissions to directions paper: AEMO, pp. 2-4, Clean Energy Council, pp. 1-2, Enel-X, p. 2, Flow Power, p. 3, PIAC, p. 3.

<sup>15</sup> Submissions to draft determination: Ausnet, p. 2, Citipower, Powercor & United Energy, p. 1, enX, p. 4, Rheem, p. 3, PIAC, pp. 6-7.

<sup>16</sup> Submissions to directions paper: Retailers (Origin, Energy Qld, Momentum), lighting and CER providers (Schreder, Signify, Connected Light Solutions, Master Electricians, OrangeTek), Consumer advocates (IPWEA, Lighting Council Australia, Australian Smart Communities Association, Qld and SA departments of transport).

<sup>17</sup> Submissions to draft determination: AGL, p. 2, Endeavour Energy, p. 1, EnergyAustralia, p. 5, Energy Networks Australia, p. 3, Energy Queensland, p. 2, Origin, pp. 2-3.

<sup>18</sup> Submissions to draft determination: Ausnet p. 3, EnergyAustralia, p. 11, Energy Queensland, pp. 5-7, Evoenergy, p. 4, Intellihub, p. 7, IPWEA, p. 3, Master Electricians Australia, p. 6, Vector Metering, p. 6.

<sup>19</sup> Submission to draft determination: Australian Energy Council, p. 1.

<sup>20</sup> Submissions to draft determination: Australian Energy Council, p. 1, Energy Queensland, p. 2, Energy Networks Australia, p. 3, Essential Energy, p. 3, PLUS-ES, pp. 8-11, Tas Networks, p. 3.

<sup>21</sup> Submissions to draft determination: Citipower, Powercor & United Energy, p. 2, Energy Networks Australia, p. 3, Energy Queensland, p. 2, SA Power Networks, p. 8.

During this rule change process, many stakeholders have emphasised the need to address CER reforms holistically. The Commission recognises that other reforms are required to optimise the full potential of flexible CER and has considered this rule change in this broader context.

AEMC rule changes and reviews that intersect with this rule change include the:

- · <u>'Integrating price responsive resources into the NEM' (IPRR) rule change</u>
- <u>'Accelerating smart meter deployment' rule change</u>
- · 'Empowering consumers with real-time data' rule change
- · <u>'Electricity pricing for a consumer-driven future' review</u>

The AEMC is also working with other market bodies and government officials on reforms that sit outside the Commission's remit, such as the AER's <u>Export limit guidance note</u>, the CER Taskforce work on interoperability, and work on providing consumers with information and tools to make decisions that suit their needs. The <u>National CER Roadmap</u> outlines this ongoing CER reform work.

### 2 The final rules will contribute to the energy objectives

# 2.1 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.<sup>22</sup> For this rule change, the relevant energy objectives are the NEO and NERO.

The NEO is:23

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:24

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.

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<sup>22</sup> Section 88(1) of the NEL and section 236(1) of the NERL.

<sup>23</sup> Section 7 of the NEL.

<sup>24</sup> Section 13 of the NERL.

The <u>targets statement</u>, available on the AEMC website, lists the emissions reduction targets to be considered, as a minimum, in having regard to the energy objectives.<sup>25</sup>

On this basis, and as discussed further below, the Commission has made more preferable final rules that it considers will better contribute to achieving the NEO and NERO than the rule changes proposed in AEMO's rule change request.

Chapters three to five provide further information on the Commission's decisions and as noted responses to stakeholder feedback.

### 2.2 We must also take these factors into account

### 2.2.1 We have considered whether to make more preferable rules

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.<sup>26</sup> For this rule change, the Commission has made more preferable final rules. The reasons are set out in section 2.3 below.

### 2.2.2 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).<sup>27</sup> 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.<sup>28</sup> 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 more preferable final retail rule meets the consumer protections test. The Commission has maintained the application of consumer protections for small customer premises, including premises with SSPs. The Commission considers that this provides appropriate protections while aiming to provide flexibility and choice where it best suits consumers and their needs.

# 2.3 Introducing more opportunities to separate and use flexible CER will advance the NEO and NERO

The Commission has considered the NEO and NERO, and the issues raised in the rule change request, and has assessed the final rules against the six assessment criteria outlined below. Energeia has also carried out a cost-benefit analysis (discussed in Chapter six) to evaluate the impacts of the various policy options.

**Outcomes for consumers.** For consumers who can use and choose to take up more flexible products and services for their CER, we have examined needs and benefits including consideration of:

• What consumers need to use their CER as they intended but also have the confidence for their CER to be used in a way that supports the power system at lower cost. This includes

<sup>25</sup> Section 32A(5) of the NEL and section 224A(5) of the NERL.

<sup>26</sup> Section 91A of the NEL and section 244 of the NERL.

<sup>27</sup> Section 236(2)(b) of the NERL.

<sup>28</sup> That is, the legal tests set out on sections 236(1) and (2)(b) of the NERL.

information, appropriate incentives, pricing outcomes and appropriate protections where necessary.

- What changes are necessary so that consumers are appropriately protected when dealing with multiple FRMPs?
- Would the change give consumers a more direct connection to price incentives in a way that allows them to get more value out of their CER?
- What benefits might be created for all consumers, including those without CER, such as increased security and reliability, more innovative services, or lower prices and how do they measure against costs?

**Increases to innovation and flexibility:** We have considered if, over the longer term, the rule change is likely to increase the potential for innovation in services or service types being developed across these markets: retail market – i.e. new offerings for consumers; the wholesale electricity market; ancillary services markets; markets for network services.

**Principles of market efficiency, in particular, competition:** The Commission has considered the overall impacts on market efficiency, with a key focus on whether the proposal would create greater retail competition through disaggregating existing energy services and encouraging new energy services.

**Impacts on safety, security, and reliability:** To make our decision, we have considered if the rule change would create increased options for flexible demand and ancillary services. Likewise, we have considered if, by enabling resources to be independently treated in market settlements, the rule change will make it more likely for businesses and consumers to use and invest in CER in a way that efficiently promotes system reliability and security.

**Implementation requirements and functions and associated costs:** We have carefully considered implementation requirements and the impact of any costs on all parties. We also considered the interaction of this rule change with other reforms already underway. This is further discussed below.

**Emissions reductions:** The Commission has considered whether the rule change is likely to efficiently contribute to achieving government targets for reducing, or that are likely to reduce, Australia's greenhouse gas emissions.

These assessment criteria reflect the key potential impacts – costs and benefits – of the rule change request. Our reasons for choosing these criteria are set out in the <u>rule change consultation</u> <u>paper</u>.

The following section explains how the final rules will contribute to achieving the NEO and the NERO when assessed against the criteria and that the final rules will better meet the NEO and NERO than AEMO's proposed rules. That is, the rules will provide greater opportunities to optimise the value of CER flexibility by reducing the barriers and costs for consumers to separately identify and manage their CER.

### 2.3.1 The rules will deliver long-term benefits for consumers and maintain consumer protections

The rules are likely to deliver long-term benefits for consumers in a variety of ways. For consumers looking to participate in arrangements for flexible CER, the rule change will do this by:

- allowing consumers to have better visibility of their flexible CER by making it easier to separate their flexible loads from their passive loads
- making it easier for consumers to access different products and services for their flexible CER

- making it easier for large customers to engage different energy service providers to unlock value from their flexible CER
- reducing the cost of separating flexible and passive loads, by allowing consumers and their agents to use in-built measurement capability in technology such as batteries and electric vehicle (EV) chargers.

These arrangements will make it easier for consumers to access the full value stack of opportunities from their CER through dedicated tariffs and services that reward the responsiveness of CER to market prices or grid conditions.

For example, the ability to separately meter passive and flexible loads will make it easier for providers to use the mechanisms envisaged under the IPRR rule change to participate in dispatch with unscheduled price-responsive resources. The ability to separate passive from flexible loads is also likely to make it easier for networks and retailers to offer dedicated tariffs for flexible resources such as EV chargers, which will enable consumers to make the most of their resources and have flow-on benefits for the energy system.

For consumers who do not have CER, rule changes will facilitate better integration of flexible CER into the power system to deliver a more reliable and secure energy system that will benefit all consumers. It could do this by enabling lower wholesale and FCAS costs as a result of CER devices participating in dispatch (through the mechanism envisaged under the IPRR rule change) and by networks offering cost-reflective pricing.

The in-built metering arrangements will also offer benefits to consumers. These arrangements will make it easier for participants to deploy public EV chargers, which will provide consumers with more choice and contribute to critical charging infrastructure needed to support the uptake of EVs.

By enabling direct measurement of energy flows in smart street lights, the arrangements will deliver benefits in the form of reduced energy costs, which can be passed on to consumers in the form of reduced council rates. Supporting the uptake of technology like smart streetlights will also have broader consumer benefits, including reducing the length of lighting outages and thereby improving community and road safety.

As noted above, we are maintaining consumer protections for small and large customers for the new arrangements.

### 2.3.2 The rules will facilitate innovation and flexibility

The final rules and supporting arrangements are likely to encourage energy service providers to offer innovative energy products and services to consumers who are looking to use their CER in different ways. They will do this by making it easier to separately meter passive and flexible loads and use in-built technology for metering CER and other technology.

The rule change will also support innovation in technology with in-built measurement capability, such as smart streetlights and EV chargers. The rules have been developed with innovation and flexibility in mind to support and facilitate new technologies to offer in-built metering. The rules allow AEMO to determine (and change) meter specifications and metrology procedures to cater to emerging technologies and use cases. In the near future, the Commission anticipates that the proposed arrangements will support innovation of in-built measurement capability in technology such as solar PV and batteries.

### 2.3.3 The rules will promote market efficiency, particularly by increasing competition

The rules will enhance market efficiency by supporting competition in the energy retail sector, by making it easier to separate, have visibility of, and manage CER through SSPs and flexible metering arrangements. For small customers, the rules will encourage competition by making it easier for providers to offer different products and services for flexible CER. For large customers, arrangements will enhance competition by reducing transaction costs for customers to obtain an SSP and engage multiple service providers to manage and extract value from CER (i.e. instead of creating an embedded network).

The rules will also reduce barriers and transaction costs for market participants by:

- making it easier for energy service providers to better participate in dispatch in the wholesale energy market through the mechanism envisaged under the IPRR rule change
- supporting networks to procure demand and export management services more efficiently from flexible resources, helping to reduce the need for network augmentation.

### 2.3.4 The rules will contribute to system reliability and security

The rules are likely to contribute to system reliability by facilitating the integration of flexible CER into the power system.

As outlined, the rule changes will make it easier for flexible loads to be metered separately for the purposes of settlement and for these resources to provide wholesale, network, and other services. Further, the rules support the provision of an aggregated resource that aggregators could use to deliver secure and reliable energy at a lower cost through the mechanism envisaged under the IPRR rule change. In the future, we anticipate that it would also make it easier for flexible CER to participate in scheduled load activities through a mechanism such as the one currently being considered through the IPRR rule change.

### 2.3.5 The rules will minimise implementation costs

The Commission has engaged with stakeholders through a variety of forums to identify the nature of costs that will be incurred to give effect to the proposed arrangements. The arrangements established by these rules will be voluntary and will leverage existing market systems, to enable service providers and consumers to take up these arrangements when and how they see fit. As a result, upfront system costs associated with this rule change will be relatively small. Further information about implementation considerations is in Chapter seven.

In its cost-benefit analysis, Energeia has identified and valued key costs associated with the rule change, including costs related to system changes for AEMO, retailers, metering parties, and DNSPs, and NMI allocation costs. In developing its cost assumptions and estimates, Energeia took into account stakeholder feedback.

Energeia has estimated that the rule change will lead to \$10.4 million in annual system costs<sup>29</sup> and that to balance these system costs, a subset of small and large consumers will need to participate for benefits to outweigh the costs.<sup>30</sup> A summary of this analysis is in Chapter six and the full analysis is available in Energeia's final reports.<sup>31</sup>

<sup>29</sup> Benefit Analysis of Load-Flexibility from Consumer Energy Resources - Final Report, 15 August 2024, p. 20.

<sup>30</sup> Ibid, p. 7.

<sup>31</sup> Benefit Analysis of Load-Flexibility from Consumer Energy Resources - Final Report, 15 August 2024; Measuring Energy Flows from In-Built Technology (Streetlights, EV Chargers, Other Street Furniture) Analysis - Final Report, 15 August 2024.

### 2.3.6 The rules will contribute to emissions reductions

The final rules will support emissions reductions by supporting energy efficiency of public assets such as street lights (leading to emissions reductions through reduced energy consumption) and thereby helping to achieve the emissions reduction targets set out in our <u>targets statement</u>. Energeia's cost and benefit analysis has identified that the rule change could deliver up to 262,000 tonnes of CO2 emissions reductions over 20 years as a result of smart street lighting unlocked by the rule changes.<sup>32</sup> This is partly offset by a potential slight increase in emissions arising from small and large customers using CER to provide network services, instead of providing low-emissions energy to the wholesale market.<sup>33</sup>

The rule change could also contribute to emissions reductions by increasing opportunities for CER to be used for market and grid services, particularly as a result of the interaction with the IPRR rule change. Modelling undertaken for the IPRR rule change indicates that CER participating in dispatch under the mechanism envisaged under IPRR will reduce emissions (by replacing higher-emissions generation) and that this rule change will make it easier for CER to participate in dispatch.<sup>34</sup>

For example, CER can shift 'load' from higher-emissions times of day (i.e. overnight) to low-emissions times of day when cheap renewable energy is abundant. The rule changes may also make it easier for orchestrated CER to provide low-emissions generation at times of high grid demand, thus potentially displacing fossil-fuel power generation that would have been required otherwise. It should be noted that, other than in relation to street lights, the emissions reduction impacts of this rule change alone (aside from how it would assist the IPRR rule change) were deemed negligible, considering this rule change does not directly impact the level of uptake of CER flexibility in the NEM, or how it is applied.<sup>35</sup>

<sup>32</sup> Ibid, p. 21.

<sup>33</sup> Benefit Analysis of Load-Flexibility from Consumer Energy Resources - Final Report, 15 August 2024, pp.35-39.

<sup>34 &</sup>lt;u>Draft rule determination, Integrating price-responsive resources into the NEM</u>, 25 July 2024, p. 21, 52.

<sup>35</sup> Benefit Analysis of Load-Flexibility from Consumer Energy Resources - Final Report, 15 August 2024, p. 33.

### 3 Flexible trading with multiple energy service providers at large customer premises

As outlined in Chapter one, the Commission has made more preferable final rules (final rules) to introduce flexible trading<sup>36</sup> with multiple FRMPs at large customer premises.

This chapter sets out:

- An overview of the framework, including key stakeholder feedback.
- Arrangements that will support the framework, including:
  - market arrangements
  - market functionality (roles and responsibilities)
  - technical requirements
  - implementation considerations.

### 3.1 Overview of the final framework

### 3.1.1 Overview

The final rules establish a framework for flexible trading that will enable large customers to establish SSPs and engage multiple energy service providers to manage their flexible resources.

The final rules largely retain the arrangements set out in the draft determination. The key features of the framework are:

- It is voluntary.
- It enables a large customer to establish SSPs and engage multiple FRMPs at their premises (section 3.3.1).
- The relationship between FRMPs will be governed by existing regulatory arrangements and contractual arrangements (section 3.3.2).
- Accredited NMI service providers are responsible for establishing and maintaining SSP NMIs. These arrangements to differ to the arrangements outlined in the draft determination, as outlined in section 3.4.1.
- Distribution network tariffs are levied to the primary FRMP (section 3.4.3).
- It leverages existing subtractive settlement arrangements to minimise implementation costs (section 3.5.1).

The key components of the framework are captured in Figure 3.1.

<sup>36</sup> In this determination, 'flexible trading' of CER consumers taking up different product and service offers for their CER. For the industry, it means that CER can be more effectively used in the wholesale energy and ancillary services market and for network services.

#### Figure 3.1: Flexible trading at large customer premises with multiple energy service providers



Source: AEMC

Note: The figure illustrates a scenario where a large customer chooses to obtain two SSPs, engages a second FRMP to manage the flexible load/generation at these SSPs, and uses type 8A meters for the flexible resources at the SSPs- a large battery and EV charger (assumes that in-built metering capability is available for this technology).

Note: The image is illustrative and does not intend to represent the details of the wiring infrastructure accurately.

#### 3.1.2 This rule change will deliver benefits to consumers and contribute to the NEO and NERO

Energeia's analysis indicates that for large customers, the primary benefits delivered by this rule change will be avoided metering costs, as a result of being able to use a type 8A meter (in-built). Energeia did not quantify other benefits from competition, innovation, improved certainty or locational variation of network costs.

The analysis indicates that under all scenarios, the rule change delivers a net benefit for large customers using an SSP and that significantly higher benefits could be achieved if SSPs are used to enable cost-reflective pricing and engage in dispatch through the mechanism proposed under the IPRR rule change.<sup>37</sup> The findings of the benefits and costs are outlined in detail in chapter 6.

As noted in Chapter two, the Commission considers that the final rules advance the NEO and NERO by enabling consumers to gain more value from their flexible CER through increased choice of energy service providers and their products and services, lowering the barriers to entry for multiple FRMPs to provide energy services at a premises and thereby promoting innovation and competition, and contributing to system reliability and security by facilitating the integration of flexible CER into the power system. Further details about how these rule changes contribute to the NEO and NERO are outlined in Chapter two.

The remainder of this chapter outlines stakeholder feedback to the draft determination and the Commission's final analysis and decision in relation to the-large customer element of this rule change.

### 3.2 Stakeholder feedback to the draft determination

Stakeholder views in response to the draft determination were broadly consistent with views expressed in response to the directions paper.

Many stakeholders<sup>38</sup> expressed support for the flexible trading framework, on the basis that it would encourage competition, increase consumer choice, and offer a more appropriate, enduring and less complex framework to enable a second NMI compared to the embedded network framework.

Enel X noted that it would enable large customers to "extract greater value from their flexible resources through improved competition for flexibility services".<sup>39</sup> Tesla noted that it provides "huge opportunity for emerging retail and customer models, competition in the provision of EV charging services, and benefits to the consumer."<sup>40</sup>AGL noted that it provides "the necessary clarity on how the metering arrangements should apply to large customers."<sup>41</sup> The AER also confirmed that "it supports the proposed new framework for flexible trading at large customer premises, instead of adopting the current embedded networks framework."<sup>42</sup>

AGL suggested improving the arrangements by providing more guidance on the definition of large customer (to cover the scenario where loads are split across multiple meters) and to set out requirements for information exchange for FRMPs, such as timeliness and accuracy.<sup>43</sup> These matters are addressed below at sections section 3.3.1 and section 3.3.2.

Most networks did not expressly oppose the framework, but reiterated concerns about the complexities that the framework may introduce related to compliance with dynamic operating envelopes, unpredictability arising from switching of loads, and allocation of tariffs to primary FRMPs.<sup>44</sup> Some advocated for this risk to be addressed through the development of a compliance

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<sup>37</sup> Benefit Analysis of Load-Flexibility from Consumer Energy Resources: Final Cost-Benefit Analysis, Final Report, 15 August 2024, pp. 8-9

<sup>38</sup> Submissions to draft determination: AER, AEMO, PIAC, EUAA, Clean Energy Council, Electric Vehicle Council, Flow Power, Enel X, Alinta, AGL, Tesla,

Master Electricians, Landis & Gyr. 39 Submission to draft determination: Enel X, p. 1.

<sup>40</sup> Submission to draft determination: Tesla, p.2.

<sup>41</sup> Submission to draft determination: AGL, p. 2.

<sup>42</sup> Submission to draft determination AFR

<sup>43</sup> AGI pp 6-7

<sup>43</sup> AGL, pp. 6-7.

<sup>44</sup> Submissions to draft determination: Citipower & Powercor and United Energy; SA Power Networks; Energy Queensland; Endeavour Energy. Submission to directions paper: Joint NSW DNSP Response.

framework for DOEs for the flexible trading model.<sup>45</sup> These concerns are addressed at sections section 3.4.3 and section 3.5.1.

Several larger retailers reiterated their scepticism of the framework and the benefits it can offer, noting that consumers can obtain value from their CER through a single retailer, consumers can engage multiple FRMPs through the embedded network framework, that it would require complex arrangements between FRMPs, it would expose retailers to significant wholesale market risk, and retailers would be required to upgrade billing, forecasting, and settlement systems.<sup>46</sup> These concerns are addressed at sections section 3.3.2 and section 3.3.3.

# 3.3 We are establishing a range of market arrangements to support flexible trading with multiple energy service providers

This section outlines the market arrangements that would support this framework including:

- eligibility requirements
- arrangements between FRMPs
- whether assets can switch between the primary and SSPs
- the interaction with the <u>Network Exemption Guideline.</u><sup>47</sup>

As noted above, these arrangements largely retain the arrangements outlined in the draft determination.

### 3.3.1 The framework has minimal eligibility requirements

The final rules provide that the following eligibility requirements apply for large customers to establish SSP NMIs and have multiple FRMPs.

For a large customer to have SSP NMIs:

- There must be only one customer at the connection point. This differs from the embedded network framework, where several customers may be connected to child connection points behind a single parent connection point. A business customer with several connection points across several sites may choose to aggregate its load across the different connection points to meet the threshold of a large customer in order to participate in flexible trading. That is, a business customer who meets the threshold could then engage multiple energy service providers and establish SSPs at these connection points.
- The SSP NMI needs to be established downstream of a transmission or distribution network connection point.

These requirements would be provided as amendments to Chapters 2, 7 and 10 of the NER (see clauses 2.3.4 and 7.2.6, and Ch 10 definitions of market connection point, secondary settlement point in the final rule).

For a large customer to engage multiple FRMPs at one premises:

 The customer must meet the definition of a large customer as per the NERL or jurisdictional legislation. Under the NERL, a larger customer is a business customer that consumes above the upper consumption thresholds defined in the NERL regulation as 100MWh per year (NERL section 5(3) and National Energy Retail Regulations section 7(b)).

<sup>45</sup> Submissions to draft determination: SA Power Networks pp. 6-7; CP&PA&UE, p. 1.

<sup>46</sup> Submissions to draft determination: AEC; Shell Energy, p.1; Origin, pp.1-2; Red Energy & Lumo Energy, p.2; Energy Australia, pp. 2-8; ENGIE, pp.3-4.

<sup>47 &</sup>lt;u>AER, Electricity Network Service Provider – Registration Exemption Guideline, Version 6, March 2018.</u>

- The possibility of a large customer falling below the consumption threshold for a large customer (become a small customer) is managed through a new clause 2.3.2 in the NER.
- The secondary FRMP must be registered as a Customer or an Integrated Resource Provider (in its capacity as a Market Customer or a Small Resource Aggregator) and must classify the SSP as one of its market connection points. An SRA can only classify the SSP:
  - if it is a small resource SSP, which only applies where the metering installation that comprises the SSP, is for one or more small generating units or small bidirectional units (i.e. units exempt from registration), and
  - the only supply to the SSP is for use by the small bidirectional unit or auxiliary load of the unit.

These requirements will be provided as amendments to chapters 2 and 10 of the NER.48

# 3.3.2 The relationship between FRMPs will be governed by existing regulatory and contractual arrangements

In response to the draft determination, some stakeholders expressed concern about how arrangements between FRMPs would operate without new regulatory arrangements, such as notification requirements<sup>49</sup> and standards for information exchange.<sup>50</sup>

Taking into account additional stakeholder feedback and the Commission's criteria, the Commission has determined to retain the draft position- the rules will not require a contractual relationship between FRMPs participating in flexible trading. Roles and responsibilities of FRMPs and the relationship between FRMPs will be governed by existing arrangements in the NER, NERR, and NERL, and by contractual arrangements between the customer and FRMPs.

The Commission considers that these arrangements will achieve the most efficient and low cost outcomes for market participants and the market more broadly. The scenarios below outline how existing arrangements will apply to FRMPs using flexible trading.

### No formal notification requirements

The Commission does not consider that formal notification requirements will be needed between primary and secondary FRMPs. If either FRMP requires access to particular information, it could be acquired from the customer, through contractual arrangements between FRMPs, or through AEMO systems. Current arrangements under the NER will also enable primary FRMPs to obtain metering data from SSP NMIs, in the way that they currently do from child NMIs under embedded networks (see section 3.4.2 for details). Further, the Commission understands that at large customer premises with SRAs using the embedded network framework, customers and FRMPs have arrangements in place to manage the exchange of critical information between parties (e.g. in relation to network tariffs and connection limits).

### **Disconnection for non-payment**

The final rules do not change the existing regulatory framework for de-energisation of large customers. This means that if the primary retailer disconnects supply to the customer at the primary connection point, the existing arrangements for large customer disconnections will apply. In a scenario where there is a second settlement point behind the primary connection point and the primary connection point is disconnected, the customer will also lose supply at the SSP NMI and de-energisation would occur at both points.

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<sup>48</sup> Final electricity rule, rules 2.1B, 2.2, 2.3; Chapter 10 - definitions including secondary settlement point and small resource secondary settlement point.

<sup>49</sup> Submission to draft determination: EnergyAustralia, p. 5.

<sup>50</sup> Submission to draft determination: AGL, p. 6.

Similarly, the existing approach to re-energisation will apply, in that each retailer must apply for reenergisation (that is, the SSP would not automatically be re-energised when the primary connection point is re-energised).

As noted above, obligations to notify about disconnection could be included in contractual arrangements between the customer and FRMPs.

For the purposes of settlement, AEMO metrology procedures will specify that when metering data providers (MDPs) 'flag' to AEMO that there is a disconnection or network outage at the connection point, AEMO will use that flag when processing the metering data for the SSPs (and revert the value to zero). This will flow through to existing arrangements for settlement under Chapter 3 of the NER.

The Commission considers that retailers at primary connection points and the customer (and therefore secondary FRMP) will be able to agree terms relating to the treatment of any energy flows at times of a supply outage on the network without the assistance of additional market processes. This approach acknowledges that large customers have unique arrangements and complex contractual arrangements governing matters with and between their retailers.

### Failure of the primary or secondary FRMP

If the primary or secondary retailer fails, the existing retailer of last resort (ROLR) provisions in the NERL will apply. That is, the previous retail contracts are replaced with a new arrangement with the relevant designated retailer of last resort. If the secondary FRMP who is a non-retailer fails, metering data would no longer be provided from the secondary NMI and the primary FRMP would become responsible for the entire energy flow at the premises.

The Commission considers that arrangements for this event could be managed by contract between the customer and FRMPs if needed. This approach also acknowledges that large customers have unique arrangements and specific contractual arrangements governing matters with and between their retailers.

### Retail competition is in the long term interest of consumers

In its submission to the draft determination, Enel X noted that the Commission's decision to enable large customers to obtain SSPs and engage another energy service provider without the consent of the primary FRMP "will help reduce barriers to third parties providing flexibility services", but that it holds "concerns that primary FRMPs could still prohibit secondary settlement points through anti-competitive customer contracts".<sup>51</sup> The Commission understands that issues regarding anti-competitive contracts may currently occur in relation to embedded networks.

The Commission considers that one of the key benefits of this rule change is that it will make it easier for FRMPs to provide energy services to large customers for their flexible CER and thereby promote innovation and competition. Behaviour that inhibits customers from accessing a variety of energy services would be counter-productive to the aim of these arrangements and inconsistent with the NEO and NERO, which focus on promoting the efficient use of energy services for the long-term interest of consumers.

The Commission has considered options within our purview to address these concerns. However, the Commission has not identified enforceable regulatory approaches that would be likely to make a material difference to the contracting approaches of commercial parties.

The Commission recognises that this may be an important issue and will aim to monitor barriers to the uptake of SSPs, where data is available.

The Commission notes that stakeholders concerned about FRMPs engaging in anti-competitive behaviour should also relay these concerns to the Australian Competition and Consumer Commission (ACCC).

### **Retail Exempt Selling Guideline applies**

The requirement for FRMPs to obtain retailer authorisation or exemption under the <u>Retail Exempt</u> <u>Selling Guideline</u> will apply to secondary FRMPs where secondary FRMPs are on-selling energy to the customer.<sup>52</sup>

#### **Dispute resolution arrangements**

Dispute resolution between FRMPs will be governed by the existing dispute resolution process set out in Chapter 8 of the NER. The Commission has not identified a need to develop particular arrangements for the flexible trading framework and considers that the existing processes are adequate.

### 3.3.3 Switching of assets across FRMPs

The Commission has determined to not regulate the switching of assets across FRMPs at large customer sites using these arrangements.

During consultation, several stakeholders expressed concerns about enabling customers or their agents to switch resources between secondary and primary FRMPs. Some retailers suggested that it would expose them to wholesale market risk and undermine their hedging position.<sup>53</sup> One noted that it "exposes FRMPs to risks of load being shifted to or from the secondary point without warning, and potentially in conflict with market signals."<sup>54</sup> Another noted that "switching should be managed contractually between the large customer and its FRMPs and does not require regulation under the National Electricity Rules."<sup>55</sup>

Some DNSPs noted potential safety risks related to wiring between large assets. The joint submission from Citipower and Powercor and United Energy noted that switching of resources "risks back-feed and safety risks associated with alternative points of supply. Such designs need to be consistent with AS3000, the relevant jurisdictional Service and Installation Rules, and should involve consultation with jurisdictional Electrical Safety Regulators."<sup>56</sup>

The Commission notes that there may be risks to primary retailers posed by switching of resources between the primary and secondary NMIs (i.e. that switching could undermine the hedging positions of retailers and, thereby, their ability to offer customers hedged products). We also note that some jurisdictions impose restrictions on switching between points in service installation rules and that customers and FRMPs will take these rules into account when choosing arrangements that best suit their business model.

<sup>52</sup> NERL, s88.

<sup>53</sup> Submissions to draft determination: EnergyAustralia, pp. 3-6; Red Energy & Lumo, p.2; Shell Energy, pp. 1-2. Submissions to directions paper: Red Energy & Lumo Energy, pp. 4-5; Shell Energy, pp. 2-3; EnergyAustralia, pp.4-5.

<sup>54</sup> Submission to directions paper: Shell Energy, p. 2.

<sup>55</sup> Submission to draft determination: Alinta, p. 2.

<sup>56</sup> Submission to directions paper: Citipower & Powercor and United Energy, p. 4.

Taking into account stakeholder feedback and the Commission's criteria, the Commission considers that the choice to switch and any risks posed by customer switching can be managed by contractual arrangements between the customer and FRMPs, that it may enable a consumer to extract more value from their CER, and we do not propose to regulate this activity in the NER at this time.

### 3.3.4 Interaction with the Network Exemption Guideline

The final rules aim to create a more transparent, appropriate, and efficient alternative to the embedded network framework for large customers to obtain an SSP and engage multiple FRMPs to unlock value from their CER.

The rules also aim to provide certainty for large and small customers and their FRMPs about the application of the AER Network Exemption Guideline (the Guideline).<sup>57</sup>

In its submission to the draft determination, the AER expressed its support for the flexible trading framework as an alternative to the embedded network framework.<sup>58</sup> The Commission has worked with the AER to consider measures to clarify the interaction between the rule change and the Guideline.

In order to provide certainty to customers and their FRMPs and minimise regulatory duplication between the NER and the Guideline, the final electricity rule amends the NER to clarify that a network exemption is not required (and hence exemption conditions will not apply) due to a metering installation being designated as an SSP or due to CER at an SSP being operated or controlled by a third party (e.g. a FRMP). The rule does this by defining two new terms, 'excluded metering installation' and 'single user network', and excluding these from the scope of the term 'distribution system'.<sup>59</sup>

### Existing embedded networks will remain embedded networks

Existing embedded networks will remain embedded networks even if an SSP is established on the premises. For example, at a large customer premises, there may be a second customer connected within the site that is buying from its own retailer through an on-market parent/child metering arrangement. The first or second customer (or both) could establish an SSP for its controllable load and the embedded network would continue to operate (and any existing exemption conditions under the Guideline would continue to apply).

# Large customers and FRMPs using embedded networks may choose, but will not need, to switch to the new framework

The final rule does not require large customers currently using embedded networks to switch to the flexible trading framework. However, customers with SRAs using embedded networks may wish to convert to the flexible trading framework. The Commission also considers that it is preferable for new entrants looking to use SRAs to adopt the flexible trading framework with SSPs rather than establishing an embedded network, as it is a more appropriate and enduring framework.

Details of the final rule and interaction with the Network Exemption Guideline are outlined in appendix C.

<sup>57</sup> The Network Exemption Guideline provides several categories of exemptions from the obligation to register as a Network Service Provider, and sets conditions for those exemptions. AER, Electricity Network Service Provider – Registration Exemption Guideline, Version 6, March, 2018.

<sup>58 &</sup>quot;As mentioned in our previous submissions relating to this proposed rule change, the AER considers that using the embedded networks framework as a means to obtain separate connection/settlement points could potentially limit consumer choice, inhibit fair competition within the energy market, and introduce further complexities in pricing structures and billing processes.", AER, p. 2.

<sup>59</sup> Final electricity rule, amending NER chapter 10. The changes are explained in more detail in Appendix C.

### 3.4 Market participant roles and responsibilities (market functionality)

This section outlines the market roles and responsibilities that would support the framework, including:

- responsibility for the establishment and maintenance of SSP NMIs
- visibility of standing and metering data at SSP NMIs
- allocation of distribution network tariffs to the primary FRMP.

# 3.4.1 Accredited NMI service providers will be responsible for creating the NMI and maintaining NMI standing data at SSPs

### Final position

Taking into account additional stakeholder feedback, Energeia's cost-benefit analysis, and the Commission's assessment criteria, the Commission has determined to alter its position and create a new accredited NMI service provider role to be responsible for creating NMIs at SSPs and maintaining the relevant NMI standing data at NMIs at SSPs.

The Commission has determined that this approach is optimal because:

- It is a lower cost option- meaning lower costs for consumers looking to use SSPs for their flexible CER.
- It enables costs of implementation to scale with the level of uptake of these arrangements.
- It will have a shorter implementation time frame compared to DNSPs performing this role.

#### Feedback from additional consultation process

In the draft determination, the Commission proposed that the role of establishing a NMI and maintaining standing data for SSPs should sit with the DNSPs. This was on the basis that it would align with the current role of DNSPs of establishing NMIs and maintaining NMI standing data for primary connection points and eliminate the need for creating a new role. In coming to this view, the Commission considered other options, including this role being assigned to other participants such as secondary FRMPs, metering parties, or a newly created NMI service provider role.

Following stakeholder feedback to the draft determination, the Commission revisited the proposal included in AEMO's rule change request - to create a new role of 'NMI service provider' equivalent to the embedded network manager role to be responsible for establishing secondary NMIs.<sup>60</sup> In response to the draft, a number of networks submitted that performing this role would require them to undertake reasonably substantial and costly upgrades. <sup>61</sup> Ausnet recommended that the role be provided to a contestable party, given the costs involved for DNSPs to perform this role.<sup>62</sup>

As a result, the Commission released a consultation note<sup>63</sup> with an alternative proposal - for a new accredited NMI service provider role to perform the role of establishing NMIs at SSPs and maintaining standing data for these NMIs. Stakeholder responses to the proposal were varied.

<sup>60</sup> AEMO rule change request, p. 9.

<sup>61</sup> Submissions to draft determination: ENA, p. 1; SA Power Networks, p. 3; Citipower & Powercor, United Energy, p. 1; Ausgrid, p.3.

<sup>62</sup> Submission to draft determination: Ausnet, pp.1-2.

<sup>63</sup> AEMC, Consultation note- NMI creation and maintenance at secondary settlement points, June 2024,

Many networks were neutral towards the proposal. SA Power Networks expressed support, noting that the final determination should clarify what role DNSPs could have at SSPs.<sup>64</sup> Some opposed the proposal, on the basis that different parties would be responsible for NMI allocation, that fees would not be regulated or transparent, and that this model would make it more difficult for DNSPs to have visibility of SSPs and could be even more costly for DNSPs.<sup>65</sup>

Most retailers were neutral towards the proposal. Those that did raise concerns noted that there would be transaction costs associated with retailers engaging with NMI service providers, that fees would not be regulated or transparent, that parties may not want to perform the role, and concern about how retailers would navigate situations when a customer changes retailer.<sup>66</sup>

Metering coordinators and embedded network managers, who are likely to perform this role, confirmed that they would have the capability and interest in being accredited for and performing the NMI service provider role.<sup>67</sup>

### Details of the arrangements

The final rules provide that the responsibilities of the NMI service provider role will be:

- creating a NMI for an SSP at small and large customer premises (at the request of the customer or the customer's retailer)
- linking the NMI at the SSP to the NMI at the primary connection point (that identifies the main metering installation at the premises)
- · creating and maintaining the relevant NMI standing data at SSPs in MSATS
- updating NMI standing data if the supply circumstances at the SSP change, such as re-activation and deactivation (unless deactivation occurs as a result of change in the FRMP, in which case MSATS will be updated automatically).

The same arrangements will apply at small and large customer premises (see Ch 4, s 1.2.2). The rules provide that the FRMP for the SSP will be required to appoint a NMI service provider for the SSP and ensure that there is always an accredited NMI service provider responsible for the SSP. If the FRMP changes, the new FRMP will not be required to retain the existing NMI service provider, but it would be obliged to ensure that a NMI service provider is always assigned to the SSP.

These arrangements will be provided for in amendments to Ch 7 (7.2.6 and 7.8.2).

AEMO procedures will also be amended to create service level procedures for the NMI service provider role that brings together accreditation requirements, processes, and other matters relevant to the role, such as defining the list of NMI management services.

### 3.4.2 Visibility of standing and metering data at SSP NMIs

The Commission notes that it has taken into account stakeholder concerns and has made rules, which will be accompanied by AEMO procedures, to ensure that DNSPs, FRMPs and other relevant parties will have visibility of NMI standing data, settlement-ready data, and metering data at SSP NMIs. We note that the AEMC has received a rule change to consider consumer access to real time data. The rule change is expected to commence in second half of 2024.<sup>68</sup>

<sup>64</sup> Submission to consultation note: SA Power Networks.

<sup>65</sup> Submissions to consultation note: Ausgrid, Ausnet, Citipower & Powercor and United Energy.

<sup>66</sup> Verbal feedback provided in consultation with AEC and members, June 2024.

<sup>67</sup> Submissions to consultation note: Plus ES, Intellihub, ENM Solutions.

<sup>68</sup> https://www.aemc.gov.au/rule-changes/empowering-consumers-real-time-data


#### **Visibility of SSP NMIs**

The rules and AEMO procedures will enable FRMPs and DNSPs to have visibility of SSPs, to assist them to identify opportunities to offer products and services at SSPs.

Currently, FRMPs and DNSPs can access NMI standing data when they are a 'role holder' at a NMI through NMI Discovery, MSATS reports, and MSATS master data. Prospective FRMPs can access NMI standing data through NMI discovery. MCs and other parties can also access NMI standing data when they are a role holder at the NMI through MSATS reports and MSATS master data.

AEMO procedures will be updated to ensure that existing access processes for NMI standing data will apply to SSP NMIs, including to enable DNSPs to obtain access to NMI Standing Data from SSP NMIs in their network.

#### DNSPs and FRMPs will be able to access metering data from SSP NMIs

#### DNSP access arrangements

The final rules will make minor amendments to Chapter 7 of the NER (7.15.5(c)(7)) to enable DNSPs to access metering data and settlements ready data from SSP NMIs. These amendments will be supported by changes to AEMO procedures.

The Commission has taken this decision in light of feedback from DNSPs that having visibility of SSP NMIs and accessing data from SSP NMIs can support network management activities.<sup>69</sup>

Noting stakeholder feedback and broader CER integration considerations, the final rules will enable DNSPs to have access to SSP NMI standing data, settlement-ready data, and metering data. The rules will provide DNSPs with the right, but not the obligation, to access this data from SSP NMIs. Stakeholder feedback indicates that providing DNSPs with the option to access to this data will lead to minimal costs for relevant market participants (DNSPs, metering parties, energy service providers, AEMO).

If DNSPs choose to access and use this data from SSP NMIs, the Commission considers that this could deliver a range of benefits to consumers and the system more broadly, including:

- improved network operation and forecasting
- easier procurement of network support services from CER
- enabling the development of targeted network tariffs for flexible trading customers.

The Commission notes that access to additional types of data, such as power quality data, has been considered through processes such as the AEMC's <u>Review of the Regulatory Framework for</u> <u>Metering Services</u> and are being considered as part of the AEMC's <u>Accelerating smart meter</u> <u>deployment rule change</u>. We also note the rule change that AEMC has received on consumers (and their agents) access to real time data.

#### FRMP access arrangements

The NER currently provides for a FRMP at the primary connection point to obtain access to data from a NMI at the premises as a 'financially interested party.' This provision will enable a FRMP at the primary connection point to access metering data from SSP NMIs, in the way that they currently do from child NMIs under embedded network arrangements.<sup>70</sup>

<sup>69</sup> Submissions to directions paper: Joint NSW DNSP Response, p. 6; Citipower & Powercor and United Energy, p. 1.

<sup>70</sup> In this case, the FRMP at the parent connection point acts as the 'Local Retailer' in MSATS for the SSP NMI.

#### 3.4.3 Allocation of distribution network tariffs to the primary FRMP

Taking into account stakeholder feedback and the Commission's criteria, the Commission has determined to retain the draft position - that network tariffs will be levied at the network connection point.

Key reasons for this decision are:

- This approach is consistent with the current NER, as to who constitutes a network customer.
- Requiring different network tariffs to be levied at primary and secondary NMIs would require wholesale changes to network pricing arrangements and significant and costly upgrades to DNSP systems, and mandating these upgrades to support the flexible trading framework alone would be inefficient.
- The merits of split tariff arrangements across points will be considered as part of the AEMC's 'Electricity pricing for a consumer-driven future' Review. We note that the draft terms of reference for a review were published on 25 July 2024. This review will consider network pricing arrangements and issues raised in this context.<sup>71</sup>
- DNSPs have flexibility under the NER to develop targeted tariffs, including at secondary points. During the consultation process, several DNSPs expressed an interest in developing more targeted tariffs. The Commission supports DNSP efforts to develop and apply tariffs that would promote efficient outcomes under the flexible trading framework arrangements.

These arrangements would be provided for through amendments to Chapter 6 of the NER (s6B.A2.1 and s6B.A2.2).

During consultation, DNSPs and retailers expressed mixed views on the draft position.

Some DNSPs and retailers expressed support for the draft position. SA Power Networks noted that the introduction of multiple FRMPs on a large customer premises introduces additional complexities for customers on demand tariffs and has the potential to create financial penalties for the primary FRMP, but agreed that these risks can be managed "on an individual basis between FRMPs" and does not support mandating the allocation of tariffs at primary and secondary points.<sup>72</sup> This view is consistent with views expressed early in the consultation process - that mandating splitting network tariffs across FRMPs would require costly and time-consuming billing system upgrades for DNSPs.<sup>73</sup> Smaller retailers reiterated their support for the network tariff being levied to the primary FRMP.<sup>74</sup>

Some DNSPs and retailers reiterated concern about the risks associated with levying all network tariffs for the customer to the primary FRMP. EnergyAustralia submitted that the framework "creates unreasonable risks for the primary retailer" due to the unpredictability of the activities of the second FRMP and the allocation of the tariff to the primary retailer.<sup>75</sup> Endeavour Energy noted that relying on FRMPs to manage pass-through of tariffs is risky and could hinder the flow of price signals to the second point and lead to inefficient utilisation of the network.<sup>76</sup>

The Commission recognises these concerns and considers that the final rules reflect the most efficient regulatory approach, noting that these issues will be considered in more detail through the Electricity pricing for a consumer-driven future' Review.

<sup>71</sup> https://www.aemc.gov.au/rule-changes/empowering-consumers-real-time-data

<sup>72</sup> Submission to draft determination: SA Power Networks, p. 9.

<sup>73</sup> Views expressed at online workshop with ENA and members, 15 Nov 2023.

<sup>74</sup> Submissions to directions paper: Enel X, p.5; Flow power, p. 3.

<sup>75</sup> Submission to draft determination, EnergyAustralia, p. 1.

<sup>76</sup> Submission to draft determination: Endeavour Energy, p.5.

Further, the Commission notes that this arrangement will not prevent the primary FRMP from passing on a portion of the network tariff to the secondary FRMP, via the customer. For example, if the relevant DNSP issues different tariffs for the primary and secondary points, the primary FRMP may choose to pass on the 'secondary tariff'. This decision should be dealt with between the customer and the primary and secondary FRMPs through their contractual arrangements.

The Commission also notes that we expect that secondary FRMPs will be incentivised to optimise the operation of flexible assets at the secondary settlement point in a manner that would minimise the customer's network tariffs and that large customers will have access to the data, skills, and resources to identify if a secondary FRMP's operations are leading to increases in network charges.

#### 3.5 There are supporting technical requirements

This section outlines the technical requirements that would support the framework, including:

- subtractive settlement arrangements
- application of existing metering requirements under Chapter 7 of the NER
- treatment of settlement anomalies
- procedures relating to inactivate NMIs at SSPs
- implementation of dynamic operating envelopes (DOEs).

#### 3.5.1 Settlement and metering arrangements

#### The framework will leverage existing settlement arrangements and apply subtractive settlement

The final rules retain the draft position - that subtractive settlement arrangements will apply between the primary connection point and SSPs at large customer premises.

This approach minimises the need for upgrade to systems currently used by market participants and AEMO. This approach also reflects well-established arrangements used by market participants under the embedded network framework, thereby reducing transaction and system change costs. DNSP billing will remain unaffected by the approach in the final rules, as they will continue to bill the retailer at the primary connection point based on total usage at the premises. These arrangements would be provided for in amendments to AEMO procedures.

The Commission notes that we considered alternative approaches and are not introducing other metering arrangements for settlement, such as multi-element or parallel metering, for the followng reasons:

- Using multi-element metering for settlement would have substantial impacts on AEMO and retailer systems handling metering data and settlement data and would be inconsistent with the current metering roles and responsibilities (i.e. which FRMP would be responsible for metering at the site).
- Parallel metering arrangements do not align with AEMO or retailer systems and this change would result in significant and costly changes to AEMO and retailer billing systems.

The Commission received minimal feedback on the proposed settlement arrangements in submissions. Retailers and AEMO noted that this arrangement aligns with existing approaches and would mean reasonably minimal changes to systems from a billing and settlement perspective. DNSPs noted that DNSP billing systems are not currently set up to levy separate

network charges for primary and secondary NMIs using subtractive metering arrangements and if DNSPs did want to do this in the future, it would require costly upgrades to billing systems.<sup>77</sup>

The Commission recognises that these changes would be required in order for DNSPs to offer different charges for SSPs. The Commission will consider how network tariffs are currently operating and could be applied in context of the NEM transition and uptake of flexible CER through the 'Electricity pricing for a consumer-driven future' Review.

## New meter type 8A will be able to be used at primary connection points and SSPs at large customer premises

The Commission's final position largely retains the draft position.

The final rules provide that large customers will be able use the new meter type 8A at either an SSP or a primary connection point.<sup>78</sup> The characteristics of the meter type at large customer premises are unchanged from the draft position, but will be described as a type 8A meter to make the arrangements clearer for stakeholders to interpret and make it easier for AEMO to develop procedures.

This new meter type will enable large customers to use technology with in-built measurement capability at these points, such as EV chargers. The main benefits for large customers associated with this change would be reduced metering costs (it would avoid the need to install a separate meter alongside the technology). Customers could still choose to use other meter types at these points if they prefer, as permitted under the NER.

The arrangements for meter type 8A are described in detail at chapter 5.

#### AEMO procedures will address issues related to settlement anomalies

AEMO's rule change request noted concerns about settlement anomalies and gaming issues. AEMO highlighted that settlement anomalies can occur during periods of system outages, where energy flows in customer electrical installations providing back-up supply are incorrectly recorded as on-market energy flows.<sup>79</sup> AEMO also raised concerns about participants retrospectively changing their market participation status to "game" the market i.e. showing themselves as generating during high price events.<sup>80</sup>

#### Settlement anomalies will be addressed through AEMO procedures

In its rule change request, AEMO noted that periods of power outages coupled with back-up power flows may lead to settlement anomalies under subtractive settlement arrangements. This scenario may lead to off market power flows within an electrical installation or embedded network to be incorrectly settled in the market. Additionally, retrospective activation of NMIs as described by AEMO may lead to gaming of the market. AEMO has advised that this issue currently occurs under embedded network arrangements and could occur under flexible trading arrangements.

Taking into account stakeholder feedback, the Commission has determined to retain the draft position. The Commission agrees with AEMO's analysis of this issue and supports its view that changes to procedures can address this issue. For example, AEMO procedures could prohibit retrospective NMI activation and deactivation for the purposes of flexible trading.

<sup>77</sup> Views expressed at workshop with ENA and members, 15 Nov 2023.

<sup>78</sup> see Appendix E, Summary of final rules, s3.6.

<sup>79</sup> AEMO Rule change request, p. 25-27

<sup>80</sup> Submission to directions paper: AEMO, pp. 4-8.

In its submission to the draft determination, Enel X noted that "any measures to address such concerns need to be appropriately nuanced to avoid impeding legitimate activities that bring value to both customers and the wider market.. [such as] where the embedded network is deliberately isolated from the grid to allow back-up generation or batteries to operate to provide demand response."<sup>81</sup>

Noting these concerns, AEMO will ensure that changes to procedures to address settlement anomalies issues will not prevent FRMPs from performing legitimate activities such as the one outlined above. The important factor is that the meter at the connection point to a Network Service Provider's transmission system or distribution system is operating (i.e. there is supply to that connection point).

#### Arrangements when the secondary NMI becomes inactive

The Commission has retained the draft position in relation to these arrangements. The final rules and AEMO procedures will determine arrangements for when secondary NMIs become inactive. Where appropriate, these leverage existing arrangements used under the embedded network framework.

#### Secondary FRMPs could choose to cease being a FRMP by declaring the NMI to be inactive

AEMO procedures will provide that where a secondary FRMP chooses to cease being a FRMP by declaring the NMI to be inactive, the inactive NMI would automatically revert to the primary FRMP. As per existing arrangements for inactive NMIs, data will still be collected and all metering roles would stay in place, but will not be "turned on." If the customer doesn't use the SSP/NMI, the roles remain inactive. If the customer opts back in, the metering roles become active again. This approach is well understood and used under the embedded network framework.

These requirements will be provided in AEMO procedures and in amendments to Chapter 2 of the NER (see final rules, Ch 2- s2.10.1) and in AEMO procedures.

The onus will be the second FRMP to deactivate the NMI where a large customer changes status to a small customer.

Some stakeholders noted that there are situations where large customers fall below the threshold for this status and need to be classified as small customers<sup>82</sup> If the large customer was using the draft framework for flexible trading and its status changed to a small customer, the final rules and AEMO procedures will provide that the onus is on the secondary FRMP to deactivate the NMI at the SSP This approach would reduce the burden on AEMO and metering service providers and allocate the responsibility to the party with an existing contractual relationship with the customer.

These requirements would be provided as amendments to Chapter 2 of the NER (see final rules, Ch 2- s2.3.2) and in AEMO procedures.

#### Implementation of dynamic operating envelopes (DOEs)

Taking into account stakeholder feedback and the Commission's assessment criteria, the Commission has determined to retain the draft position and will not alter arrangements in relation to DOEs. That is, DNSPs will continue to issue DOEs to a primary connection point(s) at a large customer premises that has adopted the flexible trading framework.

In response to the draft determination, a number of DNSPs reiterated concerns that the flexible trading framework will increase the risk of non-compliance with network connection limits.

<sup>81</sup> p.3.

<sup>82</sup> Submission to directions paper: Energy and Water Ombudsman Qld and Energy and Water Ombudsman SA.

SA Power Networks noted that relying on contractual arrangements to manage compliance to connection limits between multiple FRMPs increases the risk of non-compliance, creates the potential for additional costs and uncertainty for the customer, and could lead to increased restriction on flexible exports and inefficient utilisation of the network.<sup>83</sup> Endeavour Energy noted that flexible trading could make it more difficult to ensure that a site as a whole conforms to a DOE and that in the absence of regulatory safeguards, competitive entities could end up prioritising their own interests at the expense of the customer.<sup>84</sup> Energy Queensland agreed with the draft position, but noted it will require additional effort from networks to manage behind the meter CER coordination for DOE compliance and to manage current and voltage behaviour at primary connection points.<sup>85</sup>

While we recognise the uncertainty regarding how DOE compliance would be established at premises with multiple FRMPs, we do not consider that there is sufficient justification to introduce regulatory arrangements at this time.

The key reasons for the Commission's decision are:

- Large customers have incentives to avoid risks of non-compliance and can manage this through their contractual agreements with FRMPs (i.e. contracts would include the DOE and specify arrangements to ensure it is not breached, or consequences if it is).
- DOEs are in the process of being developed and it would be inappropriate to apply a regulatory obligation or compliance framework as part of this rule change at this stage.
- Issues regarding pricing and the operation of dynamic operating envelopes will be considered through processes such as the AER's review of Flexible Export Limits,<sup>86</sup> the AEMC's 'Electricity pricing for a consumer-driven future' Review, and the CER Taskforce work on Distribution System Operators (DSOs).
- In the future, as SSPs are taken up, DOEs start being applied, and the DOE framework
  progresses, we expect that DNSPs could provide options to customers to manage the risk of
  non-compliance, such as allocating DOEs at settlement points.

#### 3.6 Additional considerations

#### 3.6.1 Ancillary services at SSPs

In its final report, Energeia notes "FCAS is a key value driver for flexible CER but FCAS currently faces significant barriers to access, mainly metering requirements. Enabling the use of devices for MASS compliance, provided they meet operational requirements, would unlock access to the significant FCAS value stream.<sup>87</sup>

This is consistent with feedback from some stakeholders to the draft determination. In its submission, Shell Energy noted that "allowing FCAS compliant metering to be used for flexible trading purposes, as either a type 8 or 9 meter, would reduce costs and avoid the costs of further meter replacements."<sup>88</sup>

The Commission understands that under the MASS, AEMO has some flexibility to specify the location of FCAS measurement and address instances when an FCAS response may be negated intentionally or unintentionally by other 'behind-the-meter' assets.

<sup>83</sup> Submission to draft determination, SA Power Networks, p.6-7.

<sup>84</sup> Submission to draft determination, Endeavour Energy p.6.

<sup>85</sup> Submission to draft determination, Energy Queensland, p.4.

<sup>86</sup> Refer to the <u>AER's guidance on export limits</u>

<sup>87</sup> Benefit Analysis of Load-Flexibility from Consumer Energy Resources - Final Report, 29 Feb 2024, p.11.

<sup>88</sup> Submission to draft determination: Shell Energy, p. 5.

The Commission encourages AEMO to consider opportunities to streamline metering requirements for ancillary services in the MASS as part of its consultation on procedures to implement this rule change, to enable customers and their agents to deliver FCAS at SSPs.

#### 3.6.2 The rules will not allow WDRM participation at premises with SSPs

In its submission to the draft determination, Enel X queried why the draft rules did not enable premises with SSPs to participate in WDRM, noting that "Removing barriers to participating in the wholesale demand response mechanism (WDRM) is more likely to enable greater levels of DSP, while also providing AEMO with visibility and control of these resources".<sup>89</sup>

The Commission is committed to taking measures to enable integration of responsive resources, but has determined not to enable WDRM at premises with SSPs at this time.

In discussion with AEMO, the Commission considers that further work needs to be done to consider the benefits and risks of enabling WDRM at premises with SSPs, consider it in the context of the design and operation of the WDRM more broadly, and assess measures to ensure the integrity of the wholesale electricity settlement process. The Commission considers that these issues should be considered as part of the AEMC's review of the WDRM, that is due to commence in 2025.

#### 3.7 Implementation considerations

As noted throughout this Chapter, a range of changes will be required to implement the framework in the final rules, including:

- updates to AEMO's MSATS system, primarily related to NMIs at SSPs
- updates to AEMO procedures, primarily MSATS Procedures, Metrology Procedures, and Service Level Procedures
- updates to AER guidelines related to embedded network arrangements, including the <u>Network</u> <u>Exemption Guideline</u>
- changes to retailer billing systems to account for the existence of SSPs
- changes to systems of parties performing the NMI service provider role, to account for the provision of services for SSPs.

See further information about implementation considerations at chapter 7.

<sup>89</sup> Submission to draft determination: Enel X, p 4.

### 4 Opportunities to unlock the value of flexible CER for small customers

The Commission has made more preferable final rules (final rules) to make it easier for small customers and their agents to identify and manage flexible consumer energy resources (CER) (e.g. rooftop solar, batteries, electric vehicles (EVs)), separately from their passive energy use (e.g. lighting). As outlined in Chapter three, the arrangements allow for separate metering of CER through a secondary settlement point (SSP) to make CER visible in market settlement systems. The rules will also introduce more in-built metering arrangements to allow for the measurement and management of CER at a lower cost.

This chapter sets out:

- An overview of the framework, including key stakeholder feedback.
- Arrangements that will support the framework, including:
  - market arrangements
  - market functionality (roles and responsibilities)
  - technical requirements
  - consumer protections
  - implementation considerations.

#### 4.1 Overview of the final arrangements

#### 4.1.1 Overview

As noted, the final rules will enable flexible CER and passive loads to be metered and measured separately using in-built technology, so they can be managed separately in the market. The final rules largely retain the arrangements set out in the draft determination.

The key features of the framework are:

- The arrangements will be voluntary (section 4.2.1).
- A small customer will be able to establish SSPs at their premises through their retailer (section 4.2.1).
- There will be one financially responsible market participant (FRMP) at small customer premises, as per current arrangements (section 4.2.1).
- A customer will be able to use technology with in-built metering as the metering installation at the SSP (section 4.2.3).
- Leverages existing subtractive settlement arrangements (section 4.2.1).
- Consumer protections under the NERR will apply to SSPs at small customer premises, for all small customers including those in hardship or on life support (section 4.2.4).

Figure 4.1 illustrates how these arrangements could be used with an EV charger offer and a battery used in a virtual power plant (VPP).

In these scenarios:

- Energy flows at the SSP (for the EV charger and the battery) are metered by a type 8B meter.
- For market settlement, electricity flows to and from the battery or EV charger are subtracted from the flows read at the primary connection point using the national metering identifier (NMI) for the SSP.

- Market participants can use the data at the SSP to identify opportunities to maximise the value of the flexible CER at the SSP. For example, a retailer could offer a dedicated EV tariff or household battery tariff, use the CER in demand-response programs to optimise the use of the distribution network,<sup>90</sup> or use the CER in a VPP that participates in the wholesale market through the mechanism envisaged under the <u>'Integrating price responsive resources' rule change (IPRR).<sup>91</sup> In these circumstances the retailer may charge the customer a one-off upfront fee to cover the costs of setting up the SSP, or the retailer may absorb these costs as part of the offer (consistent with current options related to installation of a smart meter).</u>
- A network could also access metering data from the SSP NMI and identify opportunities to contract with customers to use EV storage capabilities for better distribution-network planning and use (e.g. the customer could join a demand-management program for EV vehicle-to-grid services where the EV battery feeds stored energy back to the grid when needed).
- In the future, this reform may also pave the way for energy service providers to offer innovative services using 'floating' or roaming' NMIs, which could enable a NMI to be assigned to an asset like an EV and to be charged at multiple points but billed to the one NMI.

#### Figure 4.1: Metering arrangements through SSPs with an electric vehicle and battery



Source: AEMC

Note: The image is illustrative and does not intend to represent the details of the wiring infrastructure accurately.

<sup>90</sup> Note with an SSP, the customer will still be able to use the battery for their own energy needs and if they choose, sell the excess charge back to the grid through being part of VPP arrangements that their retailer offers them.

<sup>91</sup> Having an SSP is expected to make it easier for parties to participate in dispatch under the mechanism envisaged under the IPRR rule change. 'This is because it reduces the need for them to forecast passive load and conformance and compliance requirements could be easier to meet at separate settlement points.' <u>IPRR, draft rule determination, 25 July 2024</u>, p. 4.

#### 4.1.2 This rule change will deliver benefits to consumers and contribute to the NEO and NERO

As outlined in Chapter two, the final rules will contribute to advancing the NEO and NERO, including by delivering:

- Outcomes for consumers: SSP arrangements and in-built metering will make it easier and cheaper for consumers to separate their CER from their passive loads and unlock value from their CER compared to existing methods, such as obtaining a second network connection point. Unlike many CER control services offered at the moment, products and services offered at SSPs will also be covered by consumer protections under the NERR.
- Innovation and competition in the retail energy sector: SSP arrangements and in-built metering
  will make it easier for retailers to provide a dedicated price for CER that reflects the volumetric
  use and to use the CER to deliver network services without needing to install a separate meter.
  In the future, we anticipate that these arrangements will also make it easier for VPPs to use
  CER to participate in dispatch through a mechanism such as the one envisaged under the
  IPRR rule change.
- System reliability and security: For the system more broadly, these arrangements will provide
  market participants and AEMO with greater visibility of CER, as data from SSPs will be held in
  a common platform (MSATS). This will support improved network planning and management,
  which will lead to a more reliable and lower-cost energy system for all consumers.

From a cost-benefit perspective, Energeia's analysis indicates that for small customers:

- Benefits will be unlocked for customers who avoid separate metering for their CER devices that are participating in network demand management projects, by using in-built metering.
- Higher benefits can be achieved when the rule change enables greater participation in dispatch and cost-reflective prices for devices and these benefits will flow to all customers.<sup>92</sup>
- System costs associated with this rule change are relatively small and for the benefits to match the associated implementation costs, around 16 per cent of CER devices will need to participate at SSPs.<sup>93</sup>
- The majority of costs identified would be borne by consumers who choose to take up the arrangements rather than the broader consumer base.

Energeia's findings are outlined in detail in chapter 6 and Energeia's final report.<sup>94</sup> The remainder of this chapter outlines stakeholder feedback to the draft determination and the Commission's final analysis and decision in relation to small customers.

#### 4.1.3 Stakeholder feedback to draft determination

In response to the draft determination, stakeholders reiterated the importance of CER integration in the NEM, but expressed different views on the ways that such integration should be realised and whether this reform would produce the desired intent.

A number of stakeholders supported the proposed arrangements to enable SSPs for small customers to realise better CER integration and greater competition in energy services. The Clean Energy Council noted the incremental role that the reform will play in unlocking CER benefits and CER integration.<sup>95</sup>

<sup>92</sup> Energeia, Benefit Analysis of Load-Flexibility from Consumer Energy Resources: Final Cost-Benefit Analysis, Final Report, 15 August 2024, pp. 7-9.

<sup>93</sup> Energeia, Benefit Analysis of Load-Flexibility from Consumer Energy Resources, Final Cost-Benefit Analysis, Final Report, 15 August, 2024, p. 9-10.

<sup>94</sup> Energeia, Benefit Analysis of Load-Flexibility from Consumer Energy Resources: Final Cost-Benefit Analysis, Final Report, 15 August 2024.

<sup>95</sup> Submission to draft determination, Clean Energy Council, p. 1.

The Smart Energy Council shared a similar view, adding that the rule change will "simplify the co-ordination required by the Consumer in managing various flexible and non-flexible loads" and support the development of a customer-centric peer-to-peer market.<sup>96</sup> Master Electricians Australia noted the potential for SSPs to enhance benefits from CER,<sup>97</sup> and Evoenergy noted that the proposed framework has the potential to optimise the value of CER to support networks.<sup>98</sup>

Several stakeholders also noted the importance and interaction with other rule changes. EnergyAustralia noted the need for the market to have certainty on whether the IPRR rule change would be made, given the interlinks and mutual benefits existing between this rule change and 'Unlocking CER benefits' rule change.<sup>99</sup>

Other stakeholders highlighted the benefits of introducing NER-compliant in-built metering for CER.<sup>100</sup> The Electric Vehicle Council noted that "Electric Vehicle Supply Equipment (EVSE) could be an important contributor to the grid of the future and secondary NMIs may be an enabler of the most efficient use of that CER" as long as metering arrangements are kept voluntary.<sup>101</sup> Tesla added that "as this sector continues to grow, having in-built flexibility in partitioning out EV charging load from the rest of the commercial or apartment building provides huge opportunity for emerging retail and customer models, providing greater competition in the provision of EV charging services and benefits to the consumer".<sup>102</sup>

Several stakeholders expressed reservations about the proposed arrangements. Some retailers and DNSPs noted that the arrangements appear to be complex, that there are already tools for CER management, and that the costs of implementation may outweigh the benefits associated with the arrangements. Further, some questioned the value it could deliver.<sup>103</sup>

Some stakeholders reiterated their view that multiple FRMPs are required at small customer premises to generate competition and innovation in products and services for small customers. PIAC indicated that "limiting small consumers to trading with a single FRMP does not level the playing field for SGAs and further entrenches the unreasonable market power of incumbent retailers".<sup>104</sup> In practice, PIAC sees the multiple FRMPs option for small customers as essential to improving retail competition and more diverse, lower-cost products.<sup>105</sup> enX noted that "this change will not increase competition, for consumer benefit, in any material sense" (due to not allowing a different FRMP to manage the SSP).<sup>106</sup>

Some stakeholders raised concerns regarding metering coordinators (MCs) engaging in anticompetitive conduct, and that the introduction of SSPs could exacerbate this issue. Rheem noted that "the MC can assume operational control of any third-party sub-meter, separate or embedded in CER (EVSE, Water Heater, etc.)" and "protected by the NER, the MC would assume sole access rights to the submeter",<sup>107</sup> thus blocking other providers from offering off-market products for CER control.

<sup>96</sup> Submission to draft determination: Smart Energy Council, p. 1.

<sup>97</sup> Submission to draft determination: Master Electricians Australia, p. 2.

<sup>98</sup> Submission to draft determination: Evoenergy, p. 1.

<sup>99</sup> Submission to draft determination: EnergyAustralia, p. 2.

<sup>100</sup> Submissions to draft determination: Clean Energy Council, p. 2; CS Energy, p. 2; Electric Vehicle Council, p. 3; Sonnen, p. 1; Tesla, p. 2.

<sup>101</sup> Submission to draft determination: Electric Vehicle Council, p. 3.

<sup>102</sup> Submission to draft determination: Tesla, p. 2.

<sup>103</sup> Submissions to draft determination: AGL. p. 2; Australian Energy Council, p. 1; Endeavour Energy, p. 1; EnergyAustralia, p. 2; Energy Networks Australia, p. 2; Energy Queensland, p. 1; ENGIE, p. 2; enX, pp. 1-3; Evergen, p. 1; Origin Energy, p. 2; Red Energy and Lumo Energy, p. 2.

<sup>104</sup> Submission to draft determination: PIAC, p. 6.

<sup>105</sup> Submission to draft determination: PIAC, p. 6.

<sup>106</sup> Submission to draft determination: enX, p. 2.

<sup>107</sup> Submission to draft determination: Rheem, p. 3

PIAC noted that giving an incumbent MC responsibility for SSPs at small customer premises "will unacceptably strengthen the market power of incumbent MCs and exacerbate issues of access to metering data".<sup>108</sup> enX noted that "the MC and retailer may be able to assign themselves operational control of metering from service providers they are in direct competition with. This is an asymmetrical and potentially anti-competitive dynamic".<sup>109</sup> The Commission has considered these issues and these are discussed in section 4.2.2 below.

Some stakeholders noted that the Commission must ensure that adequate consumer protections apply to these arrangements and that customers receive adequate information about products and services at SSPs <sup>110</sup>, noting that risk that products and services offered at SSPs may confuse or exclude consumers.<sup>111</sup> In contrast, ENGIE submitted that the "NERR amendments may create regulatory barriers to the uptake of services at secondary settlement points".<sup>112</sup> Some stakeholders also noted that these arrangements could make it more difficult for consumers to maximise self-consumption at their premises.<sup>113</sup> The Commission has addressed these concerns at section 4.3.

The Commission has considered this stakeholder feedback in making its final rules, as outlined in the remainder of this Chapter.

# 4.2 The final rules establish arrangements to support small customers to unlock more value from their CER and provide appropriate consumer protections

This section outlines the final rules and arrangements for small customers, including market arrangements, market roles and responsibilities, technical arrangements, and how consumer protections will apply.

#### 4.2.1 Market arrangements

This section outlines the market arrangements for SSPs at small customer premises:

- voluntary nature of arrangements
- continuation of one FRMP for small customers
- settlement in market systems
- deactivation of SSPs
- disconnection for non-payment at SSPs
- visibility of SSP NMIs.

#### Arrangements are voluntary

The arrangements in the final rules are voluntary and based on consumer preferences and circumstances. This also allows retailers to choose the option that best suits their business model. The voluntary nature of the arrangements is consistent with AEMO's rule change request, is supported by stakeholders, and is consistent with the rule change's aim to increase consumer choice and flexibility.

<sup>108</sup> Submission to draft determination: PIAC, p. 6.

<sup>109</sup> Submission to draft determination: enX, p. 4.

<sup>110</sup> Submissions to draft determination: Ausgrid, p. 2; Clean Energy Council, p. 2; Energy Consumers Australia, pp. 3-4; Energy Queensland, p. 5; Essential Energy. p. 2; Energy & Water Ombudsmen of NSW, Queensland, South Australia and Victoria, pp. 2-8; Evergen, p. 2; Nexa Advisory, p. 4.

<sup>111</sup> Submissions to the draft determination: Energy Consumers Australia, p. 4; Origin Energy, p. 2.

<sup>112</sup> Submission to the draft determination: ENGIE, p. 2.

<sup>113</sup> Submissions to draft determination: Evergen, p. 1; enX, p. 3

#### Small customers will continue to have one FRMP at their premises

The Commission has determined to retain the draft position that there will only be one FRMP at small customer premises. This means that a FRMP financially responsible for the connection point at a small customer premises will also be responsible for the energy flows at the SSP, if any.<sup>114</sup>

The final rules make amendments to the NER to allow a 'Market Participant' to establish one or more SSPs at a premises.

As noted above, during consultation, most stakeholders expressed support for this decision. Those who supported noted that it would support competition for different products and services for managing flexible loads, would increase consumer choice of FRMPs and products and services, and lead to network reliability benefits through improved visibility of subloads.<sup>115</sup> However, PIAC submitted that the multiple FRMPs option for small customers is essential to improving retail competition and more diverse, lower-cost products.<sup>116</sup>

Noting these views and taking into account the Commission's criteria, the Commission has determined not to progress the multiple FRMP model for small customers in this rule change. The Commission considers that further work needs to be done on the National Energy Customer Framework (NECF) to allow for future energy services that both protect consumers and enable innovation and competition. The Commission is also aware that enabling multiple FRMPs at this time has the potential to create or exacerbate issues including on the scope of the role of metering coordinators and implementation of dynamic operating envelopes. These issues need to be considered holistically through other processes such as the <u>'Empowering consumers with real time data'</u> rule change and the Energy Officials work to consider the recommendations from AER's Review of consumer protections for future energy services.

The Commission will continue to work with all relevant parties to look at options to trial multiple FRMPs for small customers, and is open to a rule change request on this option once other reforms have progressed.

#### Subtractive settlement arrangements apply between the primary point and SSPs

Taking into account additional stakeholder feedback and the Commission's criteria, the Commission has determined to retain the draft position that subtractive settlement arrangements will apply between the primary connection point and SSPs at small customer premises.

This approach reflects well-established arrangements used by market participants under embedded networks, and therefore minimises the need for changes to systems currently used by market participants and AEMO.

These arrangements are provided for in amendments to NER Ch 7 (see cl 7.2.6 and S7.4.3 in the final electricity rule). These arrangements will also be provided for in amendments to AEMO procedures related to NEM settlements.

<sup>114</sup> However, if a customer establishes two separate physical connections to the network, they can appoint different FRMPs for each connection point, as they can today under the current rules. This option is rarely practicable for small customers, because to establish a second connection point they would face a multi-step, lengthy and costly process. Further, DNSPs might be reluctant to allow the establishment of a SSP for the purpose of subloads, as explained in the directions paper.

<sup>115</sup> Submissions to directions paper: AEMO, p. 3, Alinta Energy, p. 3; Clean Energy Council, pp. 1-2; Enel X, p. 1; Flow Power, p. 3; PIAC, p. 2.

<sup>116</sup> Submission to draft determination: PIAC, p. 6.

#### Arrangements when the SSP becomes inactive

The final rules provide that AEMO procedures are to be updated to determine arrangements for when SSPs become inactive. AEMO procedures will be amended to provide that where a customer no longer wants to use an SSP, the customer could request the FRMP to declare the NMI for the SSP to be inactive. In this circumstance, the child NMI at the SSP will become inactive and not trigger subtraction from the parent NMI. That is, energy flows will be settled in the market by the FRMP for the connection point (which corresponds to the parent NMI).

As per existing arrangements for inactive NMIs, data will be collected at the NMI and metering roles will stay in place and will become active again if the customer opts back into the SSP.

As above, this approach reflects established arrangements used by market participants under embedded networks and minimises the need for changes to systems currently used by market participants and AEMO.

#### Prospective retailers and DNSPs will have visibility of SSPs

As noted in Chapter three, the rules and AEMO procedures will enable FRMPs and DNSPs to have visibility of SSPs.

Prospective retailers will be able to identify and access NMI standing data at SSP's NMIs using NMI Discovery. This means that if a customer changes their retailer, incoming retailers will be able to know if there is an SSP at the customer's premises. Once a FRMP becomes a role holder at a NMI, it will be able to access NMI standing data through NMI Discovery, MSATS reports, and MSATS master data.

Other role holders at the SSP NMI, such as MCs, will be able to access NMI Standing Data, in the way that they do for a NMI at a primary connection point.

AEMO procedures will be updated to reflect the establishment of SSP arrangements and to update access processes for NMI standing data, including to enable DNSPs to obtain access to NMI Standing Data from SSP NMIs in their network.

#### 4.2.2 Market participants roles and responsibilities (market functionality)

This section outlines the market roles and responsibilities that would support the framework, including:

- responsibility for creating and maintaining standing data for NMIs at SSPs
- visibility of standing and metering data from NMIs at SSPs
- changes to metering roles for metering installations at SSPs

### Accredited NMI service providers will be responsible for creating and maintaining the relevant standing data for NMIs at SSPs

As noted at section 3.4.1, the Commission has altered its draft position and determined to create a new accredited role - NMI service provider - to be responsible for creating NMIs at SSPs and maintaining the relevant standing data at NMIs at SSPs.

The Commission has determined that this option is optimal because:

- It is a lower cost option meaning lower costs for consumers looking to use SSPs for their flexible CER.
- It enables costs of implementation to scale with the level of uptake of these arrangements.

- Costs associated with creating and maintaining data at NMIs at SSPs will be borne by consumers taking up SSPs, rather than the broader consumer base.
- It will have a shorter implementation time frame compared to DNSPs performing this role.

These arrangements will be provided for in amendments to Ch 7 (7.2.6) and amendments to defined terms that 7.8.2(d)(1) applies. AEMO procedures will also be amended to create service level procedures for the NMI service provider role that brings together accreditation requirements, processes, and other matters relevant to the role, such as defining the list of 'NMI management services'.

#### DNSPs will be able to access metering data from NMIs at SSPs if they choose to

As noted at section 3.4.2, the final rules will make minor amendments to Chapter 7 of the NER (7.15.5(c)(7)) to enable DNSPs to access metering data from NMIs at SSPs. These amendments will be supported by changes to AEMO procedures.

The Commission has taken this decision in light of feedback from DNSPs that having visibility of secondary NMIs and accessing data from secondary NMIs will be able to support network management activities.<sup>117</sup>

For example, in the future, networks may use metering data at SSPs to offer dedicated tariffs for CER assets such as EV chargers and to procure network services.

#### Minor changes to metering roles to account for in-built metering at SSPs

The final rules retain the arrangements set out in the draft determination and arrangements for metering roles that apply at the primary connection point will largely apply in the same way at SSPs.

The rules make minor amendments to the responsibilities of metering service providers to account for the use of in-built measurement technology at metering installations. These arrangements are described in more detail at section 5.2.2.<sup>118</sup>

#### FRMPs can choose to appoint different MCs at the primary connection point and SSPs

The Commission considers that allowing a retailer to appoint a different MC at the primary connection point and at one or more SSPs will provide FRMPs with flexibility and support consumer choice and competition.

The Commission notes concerns expressed by stakeholders about the potential for the rule change to exacerbate alleged issues regarding MC anti-competitive behaviour.<sup>119</sup> As outlined in section 4.1.3, PIAC noted that MCs having responsibility for SSPs "unacceptably strengthen the market power of incumbent MCs and exacerbate issues of access to metering data".<sup>120</sup> Rheem noted that "MCs can assume operational control of any third-party sub-meter, separate or embedded in CER (EVSE, Water Heater, etc.)" and "protected by the NER, the MC would assume sole access rights to the submeter".<sup>121</sup>

<sup>117</sup> Submissions to directions paper: Joint NSW DNSP Response, p. 6; Citipower, Powercor & United Energy, p. 1.

<sup>118</sup> Under the final rules, a Metering Provider (MP) will not be required to "install" a meter at a secondary settlement point but to "commission" it; to account for the metrology being in-built (i.e., constructed with the device) before being installed on-site.

<sup>119</sup> Submissions to draft determination: Rheem, p. 3; PIAC, p. 6; enX p. 4.

<sup>120</sup> Submission to draft determination: PIAC, p. 6.

<sup>121</sup> Submission to draft determination: Rheem, p. 3.

The Commission notes that under the NER, MCs are responsible for the coordination and provision of metering services at a connection point. This includes:

- providing, installing and maintaining metering installations
- collecting, processing and retaining metering data from a metering installation and providing that data to certain parties and the metering data services database
- managing access to and the security of the metering installation, services provided by the metering installation, energy data held in the metering installation and metering data from the metering installation.

These responsibilities are intended to facilitate market operation and settlement. MCs should not be accessing metering equipment and using metering data unless in compliance with these responsibilities. As outlined, the Commission considers that the role of MCs in the context of flexible CER products and services is an important issue, and will be considered as part of the forthcoming <u>'Empowering consumers with real-time data' rule change</u>.

#### 4.2.3 Technical arrangements for SSPs for small customers

The final rules on technical arrangements for SSPs largely retain the arrangements outlined in the draft determination.

Based on feedback from AEMO to the draft determination, the Commission has made minor adjustments to the final rules to provide that type 8A and 8B meters will be able to be used at SSPs. The characteristics of the meter type that can be used at SSPs at small customer premises are unchanged from the draft determination, but will be described as a type 8B meter.

Key features of meter type 8B are:

- It is voluntary. A consumer (through their agent) can use a type 4 meter instead if they prefer.
- It will have an accuracy limit of plus or minus 2 percent.<sup>122</sup>
- It must be pattern-approved by the National Measurement Institute.
- AEMO procedures will specify meter requirements and minimum service specifications.

These arrangements will make it easier and lower cost for CER assets such as batteries and EV chargers to be metered, which will assist consumers to extract more value from their CER through their agents. The arrangements for meter type 8B are outlined in detail at chapter 5.

### 4.2.4 Consumer protections under the NERR will apply to energy services provided at secondary settlement points

The final retail rule amends the NERR to ensure that existing consumer protections in the NERR apply to energy supply services delivered at SSPs, including in relation to hardship and life support.<sup>123</sup>

The Commission has carefully considered stakeholder feedback to the draft determination - including the importance of ensuring that consumer protections apply to SSPs, preserving consumer trust and choice under the new arrangements,<sup>124</sup> and ensuring that consumers are provided with adequate information about SSPs at their premises.<sup>125</sup>

 $<sup>122\</sup>$  See sections 5.2.1 and 5.2.3 for details.

<sup>123</sup> Final retail rule, NERR rule 11A.

<sup>124</sup> Submissions to draft determination: Energy Consumers Australia, pp. 3-4, Energy & Water Ombudsmen of NSW, Queensland, South Australia and Victoria, pp. 3-8.

<sup>125</sup> Submissions to draft determination: Ausgrid, p. 2; Clean Energy Council, p.2; Energy Consumers Australia, pp. 3-4; Energy Queensland, p. 5,; Essential Energy. p. 2; Energy & Water Ombudsmen of NSW, Queensland, South Australia and Victoria, pp. 2-8; Evergen, p. 2; Nexa Advisory, p. 4.

In making its final decision, and in applying the NERO, the Commission has taken into account the following considerations:

- It is important to preserve consumer trust and choice under the new arrangements, including by preserving important consumer protections.
- It is important to minimise barriers to FRMPs offering products and services for flexible CER at SSPs where possible, to support competition and innovation, including by reducing unnecessary regulatory requirements.<sup>126</sup>
- The variety of energy services that may be provided at SSPs in the future and consumer preferences for these services may warrant greater flexibility in regulation compared to services delivered at primary connection points.

#### Customers with SSPs retain disconnection and reconnection protections

The final rules provide that if the primary retailer seeks to disconnect the premises, existing arrangements for small customers for disconnections would apply.<sup>127</sup> In this scenario, the customer's protections would apply to the premises as a whole (including any SSPs). If supply to the premises is disconnected, the customer would also lose supply at the SSP (unless it was supplied via the customer's solar PV).

For the purposes of settlement, AEMO metrology procedures will specify that when metering data providers (MDPs) 'flag' to AEMO that there is a disconnection or network outage at the connection point, AEMO can use that flag when processing the metering data for the SSPs (and revert the value to zero).<sup>128</sup> This will then flow through to existing arrangements for settlement under Chapter 3 of the NER. These arrangements are provided for through amendments to the NER and to AEMO metrology procedures.

The final rules provide that a retailer must not de-energise an SSP separately to the primary connection point.<sup>129</sup> This position differs to the position in the draft rules and has been made in response to feedback from the Energy & Water Ombudsmen in their submission to the draft determination,<sup>130</sup> citing that separate de-energisation of SSPs could expose vulnerable consumers to the loss of essential services as a result of failure to comply with a payment plan.<sup>131</sup>

Re-energisation processes and protections will also apply to SSPs in the same way they do for the premises as a whole, so that where a retailer is required to re-energise premises with an SSP, the retailer must arrange for re-energisation of the SSP at the same time as re-energising the primary connection point.<sup>132</sup>

The Commission acknowledges the additional issue raised by Energy Ombudsmen in their submission to the draft determination that tenants may face limitations in selecting the most appropriate energy provider for the premises they live in.<sup>133</sup>

<sup>126</sup> In its submission to the draft determination, ENGIE noted that FRMPs could face obstacles or limitations in managing product offerings at SSPs, p. 2.

<sup>127</sup> See the final retail rule, inserting new rule 107A into the NERR.

<sup>128</sup> Clause 7.16.3(c)(6)(v) of the NER.

<sup>129</sup> Final retail rule, rule 107A(1).

<sup>130</sup> Submission to draft determination: Energy & Water Ombudsman of NSW, Queensland, South Australia and Victoria, p. 4.

<sup>131</sup> In their submission, the ombudsmen considered a scenario of a tenant experiencing vulnerability who has the power supply to their hot water system disconnected while they are under a retailer payment plan. The scenario sought to highlight the risks that exist when SSPs are connected to the provision of an essential service and the need for appropriate protections under the final rules. Submission to draft determination, Energy & Water Ombudsmen of NSW, Queensland, South Australia and Victoria, pp. 4-5.

<sup>132</sup> Final retail rule, rule 107A(2).

<sup>133</sup> Submission to draft determination: Energy & Water Ombudsmen of NSW, Queensland, South Australia and Victoria, p. 3: "A tenant signing a lease for a new home may have little to no choice on signing a contract for services at a secondary settlement point – or limiting their choice of retail offer from their landlord's preferred retailer."

While the Commission recognises that the practice of landlords limiting a tenant's choice of energy provider goes against the principle of consumer choice and agency, it is not possible for the Commission to address these issues if they manifest as a result of tenancy agreements, which are regulated by tenancy laws in state and territory jurisdictions.

# The rules require the AER to review its guidelines and Energy Made Easy to provide transparency for consumers

The Commission has considered how the AER's <u>Better Bills Guideline</u> (the Guideline) would apply to retailer bills for households with SSPs. The Commission considers that small changes to the Guideline are needed to improve transparency and awareness for consumers and enable consumers to make informed choices about products and services offered at SSPs. These changes will help consumers to understand whether an SSP is active on the premises, what products and services are available at an SSP, and the benefits that these products and services can offer.

Under the NERR, any bill for the consumption of electricity must comply with the Guideline (rule 25). This will now include electricity consumed at SSPs, which retailers may bill under separate or combined bills. The final retail rule requires the AER to review, and if necessary update, the Guideline to take into account the final rule.<sup>134</sup>

To achieve the best outcomes for consumers, the Commission recommends that the AER consider amending the Guideline in these ways:

- Tariff and billed amount at an SSP. If a customer has an SSP, Tier 2 information should include the tariff and billed amount for the SSP separately from the other elements of the tariff. A consistent approach to including this information in bills will make it easier for consumers to interpret the benefits associated with products and services offered at their SSP.
- NMIs at the premises. We recommend that the AER make minor wording changes (e.g. in section 40(f)) to reflect the fact that a customer may have more than one NMI and meter at their premises. While this is not essential, given there is an interpretation provision in section 9 of the Guideline, the Commission considers that retailers and consumers will benefit if bills include explicit information about there being multiple meters/NMIs at customer premises.

The Commission also recommends that the AER consider whether including information about products and services at SSPs on the <u>Energy Made Easy</u> platform could further assist consumers to be aware of and make informed choices about products and services to manage their flexible CER.

The final rule also requires the AER to consider if changes to additional guidelines are needed to reflect the fact that small customers may have SSPs. Guidelines that may be reviewed include the exempt selling guidelines, retail pricing information guidelines, benefit change notice guidelines and the customer hardship policy guideline. The AER must consult on any changes to these guidelines using the retail consultation procedure. Any changes must be completed by the time the SSP rules commence, 1 November 2026.<sup>135</sup>

<sup>134</sup> Final retail rule, NERR schedule 3 Part 19 rule 11.

<sup>135</sup> Final retail rule, NERR schedule 3, Part 19, rule 11.

## Consumer protections for future energy services at SSPs should be considered as part of the review of the National Energy Customer Framework

The Commission notes that the AER completed its 'Review of consumer protections for future energy services' in 2023, and as part of this, noted the importance of providing effective protection for consumers of both traditional and new energy services, as well as minimising the cost of regulation and promoting competition and innovation.<sup>136</sup>

The Commission notes that, under the NERL, energy-specific consumer protections under the NECF apply to a customer's premises as a whole in relation to the supply of energy to the customer. We note that while SSPs may be used to deliver products and services that are not subject to the NECF, this is already possible at primary connection points, and current consumer protections under the NERR will apply to activities at SSPs in the same way as at primary points.<sup>137</sup>

We note that the AER's advice on its consumer protections review is being considered by energy officials and the CER Taskforce under the <u>National CER Roadmap</u>.<sup>138</sup>

#### 4.3 Additional considerations

#### Interaction with arrangements in Victoria

In response to the draft determination, some stakeholders noted the need to consider how these rule change arrangements will work in practice in Victoria given that Victoria is not regulated by the NECF and that DNSPs perform the metering coordinator role in Victoria.<sup>139</sup>Ausnet noted that "any delays to implement the necessary jurisdictional instruments, such as the Electricity Distribution Code of Practice, would make the Rule changes unworkable".<sup>140</sup>

The Commission notes that while the rules enable a retailer to appoint a different MC at the primary connection point and SSP, where there is one retailer at a customer's premises, it is likely that both points would have the same MC. Given this, DNSPs operating in Victoria will need to consider whether changes are required to their systems and processes to offer MC services at SSPs. The Commission notes that the implementation time frame should provide DNSPs with adequate time to manage these changes.

The Commission agrees that it is critical that jurisdictions make necessary changes to implement the rule change, particularly in relation to consumer protections. 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 and other legislative arrangements to implement the rule change.

#### Interaction between SSP arrangements and self-consumption for small customers

During consultation on the rule change, several stakeholders queried how the proposed arrangements would affect a consumer's ability to self-consume from solar PV on their premises.<sup>141</sup> enX noted in its submission that "the solar is able to either charge the battery or supply to so-called 'inflexible loads'. It cannot do both".<sup>142</sup> Evergen noted that there could be potentially erroneous customer billing stemming from applying a subtractive settlement at SSPs at premises with solar PV.<sup>143</sup>

<sup>136</sup> AER Final Advice to Ministers, p. 3.

<sup>137</sup> Final retail rule, NERR rule 11A.

<sup>138</sup> Energy ministers and climate change ministerial Council National Consumer Energy Resources Roadmap, July 2024, p. 14.

<sup>139</sup> Submission to consultation note: Citipower, Powercor and United Energy, p. 1.

<sup>140</sup> Submission to draft determination: Ausnet, p. 2.

<sup>141</sup> Submissions to draft determination: enX; Evergen.

<sup>142</sup> Submission to draft determination: enX, p. 3.

Addressing these queries, the Commission notes:

- SSPs provide an additional option for consumers to take up to extract value from their CER they are voluntary.
- Retailers offering products and services should provide consumers with adequate information to make an informed choice that aligns with their preferences (i.e. to maximise return on their assets from trading in the market or providing demand response or to self-consume to reduce their exposure to wholesale market prices).
- Retailers may need to consider arrangements at consumer premises, such as wiring of CER assets, to enable a consumer to access the optimal number and type of products and services for their CER (including self-consumption).
- Given that there will continue to be one FRMP at small customer premises, introducing an SSP will not change a FRMP's exposure to the wholesale market price and billing arrangements can be managed by the FRMP. This is because its exposure is based on the net energy flow at the connection point, established using subtractive settlement.<sup>144</sup> The Commission notes that reconciling billing for a customer would be more complex if there are different tariffs at the primary connection point and SSP.

#### Using SSP arrangements in apartment buildings

During consultation, some stakeholders expressed interest in whether the proposed arrangements could assist apartment residents to access more retail offerings. For example, if an apartment building would qualify as a commercial and industrial customer and, therefore, be able to have a different energy service provider for common areas such as lifts, pools, EV chargers in the basement.<sup>145</sup>

The Commission notes the following:

- An apartment building could qualify as a large customer and use flexible trading arrangements. The thresholds to be considered as a large electricity customer are set by jurisdictions and vary, with a range of 100 MWh – 160 MWh per year. Only large buildings with centralised flexible loads of substantial consumption volumes would qualify as large users.
- If an apartment building does not meet the large customer threshold, the options for the body corporate will be the same as for a small customer. That is, if the body corporate has a connection point that is for common property assets, it could obtain one or more SSPs to separate assets behind this point, such as EV chargers. The same FRMP would be responsible for the primary connection point and SSPs.

<sup>143</sup> In its submission to draft determination, Evergen claimed 'Fragmentation of CER behind separate settlement points erodes self-consumption value. From a billing perspective, subtractive metering means that loads behind different settlement points to solar generation will be deemed to be serviced by grid imports, not by local solar generation'. Evergen, p. 1.

<sup>144</sup> This remains the case if the customer also installs a battery behind the primary meter.

<sup>145</sup> Different from the retailer already contracted by the body corporate for common property's energy use.

### 5 Measuring energy flows using in-built technology

This chapter outlines the Commission's final determination and more preferable rules to introduce arrangements for three new meter types in the National Electricity Rules (NER) that can enable technology with in-built measurement capability to be used for settlement and billing.

The remainder of this chapter sets out:

- An overview of the arrangements, including key stakeholder feedback.
- A summary of why we consider these arrangements will benefit customers.
- · Detail on the arrangements that will support the framework, including:
  - market arrangements
  - market functionality (roles and responsibilities)
  - technical requirements
  - implementation considerations.

#### 5.1 Overview of new metering arrangements and stakeholder feedback

The Commission has considered stakeholder feedback to the draft determination and is maintaining its positions for market arrangements, market functionality and technical requirements for new metering arrangements, with minor enhancements. Section 5.2 outlines the supporting arrangements for the new meter types, stakeholder feedback, and our responses.

The new metering arrangements will assist market participants to use in-built measurement capability in technology such as streetlights, street furniture, and electric vehicle (EV) chargers to provide innovative and essential products and services to consumers. By removing the need to install a separate meter to measure energy at devices, these more flexible metering arrangements will allow for the measurement and management of energy use at a lower cost.

The main features of the rules and new type 8A, type 8B, and type 9 meters are:

- Arrangements will be voluntary and cover a range of use cases, including EV chargers and streetlights (section 5.2.1).
- Metering requirements and minimum service specifications will be set by AEMO in procedures, guided by principles in the NER (section 5.2.3).
- They will require National Measurement Institute approval (section 5.2.3).
- Streetlights and street furniture using a type 9 meter will be able to aggregate multiple loads (i.e. multiple streetlights) under one National Metering Identifier (section 5.2.1).
- Metering Providers (MPs) and Metering Data Providers (MDPs) will have new accreditation requirements for each new meter type (section 5.2.2).
- For connections such as streetlights using a type 9 meter, the Metering Coordinator (MC) role will be contestable (section 5.2.2).

#### 5.1.1 Stakeholder feedback

Through submissions and other forms of consultation, stakeholders generally expressed support for the arrangements proposed in the draft determination.<sup>146</sup>

Stakeholders support the arrangements on the basis that the new meter types will provide benefits to consumers with the least cost and disruption, provide more accurate information and improve how consumers integrate their flexible CER assets.<sup>147</sup> IPWEA noted that "the business case for smart street lighting controls is substantially influenced by the energy savings that they can deliver. These savings account for perhaps 45-60% of the easily realisable financial benefit. The current absence of a regime in the NEM that recognises the metering data from smart street lighting controls has hampered adoption of these systems."<sup>148</sup>

Stakeholders supported the use cases for type 8 and 9 meters outlined in the draft determination, such as allowing for the adoption of smart street lighting systems and utilising the in-built measurement devices of EV chargers to improve their integration into the NEM,<sup>149</sup> and the ability to aggregate multiple devices to one NMI for technology such as streetlights. Stakeholders also agreed that the proposed meter types would be broad enough to capture future use cases for type 8 and 9 metering installations.<sup>150</sup> Stakeholders noted that future extensions of metering types should be consulted on.<sup>151</sup>

Some stakeholders provided feedback on technical arrangements, including on what the flow limit should be for type 8 and 9 meters.<sup>152</sup> Some expressed some concern about the impacts on consumers from testing and inspecting devices, such as cost and interfering with manufacturer warranties.<sup>153</sup>

Some networks expressed concern about the use of third party MPs installing type 8 and 9 meters on DNSP assets,<sup>154</sup> and indicated a preference to be able to perform metering roles for streetlights, rather than allowing these roles to be contestable.<sup>155</sup> Some stakeholders also noted that AEMO should update its specifications and procedures for type 8 and 9 meters on a case by case basis.<sup>156</sup>

The Commission has taken into account this stakeholder feedback in making our final rules and determination, as outlined in more detail in the remainder of the chapter.

<sup>146</sup> Submissions to draft determination: Market bodies and Government bodies: (AEMO, AER, Clean Energy Council, ECA), Retailers: (AGL, CS Energy, EnergyAustralia), Networks: (Ausgrid, Ausnet, Energy Networks Australia, Energy Queensland, Evoenergy, SA Power Networks, Tas Networks), Consumer bodies: (PIAC), CER providers and peak bodies: (Electric Vehicle Council, IPWEA, Landis & Gyr, NBN Co, Nexa Advisory, SMA Australia, Tesla).

<sup>147</sup> Submissions to draft determination: AGL, pp. 1-2; Ausgrid, p. 2; Clean Energy Council, p. 2; Energy Queensland, p. 2; IPWEA, pp. 1-3; Landis & Gyr, p. 1; PIAC. p. 7.

<sup>148</sup> Submission to draft determination: IPWEA, p. 3.

<sup>149</sup> Submissions to draft determination: AEMO, p. 5, IPWEA, pp. 4-5.

<sup>150</sup> For example, advanced CCTV, smart city sensors that measure traffic data, public safety devices such as sirens, public WiFi and public charging points - Submission to draft determination: IPWEA, p. 5.

<sup>151</sup> Submissions to draft determination: AEMO, p. 5, Ausnet, p. 3, Evoenergy, p. 4, PLUS-ES, p. 8.

<sup>152</sup> Submissions to draft determination: Ausnet p. 3; EnergyAustralia, p. 11; Energy Queensland, p. 7; Evoenergy, p. 4; Intellihub, p. 7; IPWEA, p. 3; Master Electricians Australia, p. 6; Vector Metering, p. 6.

<sup>153</sup> Submission to draft determination: Australian Energy Council, p. 1.

<sup>154</sup> Submissions to draft determination: Australian Energy Council, p. 1; Energy Queensland, p. 2; Energy Networks Australia, p. 3; Essential Energy, p. 3; PLUS-ES, pp. 7-8; Tas Networks, pp. 3-4.

<sup>155</sup> Submissions to draft determination: Citipower, Powercor & United Energy, p. 2; Energy Networks Australia, p. 3; Energy Queensland, p. 2; SA Power Networks, p. 8.

<sup>156</sup> Submissions to draft determination: AEMO, p. 5; Ausnet, p. 3; Evoenergy, p. 4; Intellihub, p. 7; PLUS-ES, p. 8.

#### 5.1.2 These arrangements will deliver significant benefits and contribute to the NEO and NERO

Energeia's analysis indicates that the new metering arrangements will deliver up to \$100 million in benefits over 20 years.<sup>157</sup> Energeia's analysis for this element of the rule focuses on the use of in-built measurement capability for smart street lighting technology and kerbside EV chargers. The analysis found that the primary benefits delivered by the rule change are reduced wholesale costs from dimming streetlights, reduced metering installation and maintenance costs from smart streetlights, reduced emissions due to more energy efficient street lighting, and avoided metering costs of using in-built metrology for kerbside EV chargers.<sup>158</sup>

Energeia also estimated relatively small implementation costs associated with this rule change, as it is expected that new streetlight loads will be aggregated similarly to existing practices.<sup>159</sup> chapter 6 and Energeia's report contain more detail on the costs and benefits analysis for this element of the final rule.<sup>160</sup>

The Commission has determined that these arrangements will contribute to the NEO and NERO by providing consumers (and their retailers) with lower-cost metering options for their flexible CER, and are expected to deliver a range of benefits including:

- supporting the uptake of a lower-cost metering option for streetlights, kerbside EV chargers, and other CER devices (i.e. by removing the need to install a separate type 4 meter)
- contributing to emissions reductions and lower electricity costs by incentivising the uptake of dimming technology in smart streetlights (as customers will be billed on actual rather than estimated electricity usage thereby making dimming technology more cost-effective)
- promoting innovation in technology with in-built measurement capability, such as batteries.

More information about how these rule changes contribute to the NEO and NERO is provided in chapter 2.

#### 5.2 Supporting arrangements for new meter types

This section outlines the arrangements that will support the proposed new meter types, taking into account stakeholder feedback, Energeia's cost-benefit analysis, and implementation considerations. The supporting arrangements cover:

- market arrangements
- market functionality (roles and responsibilities)
- technical requirements
- implementation considerations.

#### 5.2.1 Market arrangements

The final rules will introduce three new meter types in the NER, as shown in Figure 5.1. These arrangements will be provided for in amendments to Chapter 7 of the NER.

<sup>157</sup> Measuring Energy Flows from In-Built Technology (Streetlights, EV Chargers, Other Street Furniture) Analysis- Final Report, Energeia, 15 August 2024, p. 19.

<sup>158</sup> Measuring Energy Flows from In-Built Technology (Streetlights, EV Chargers, Other Street Furniture) Analysis- Final Report, Energeia, 15 August 2024, pp. 10-12.

<sup>159</sup> Ibid, p. 13.

<sup>160</sup> See: Measuring Energy Flows from In-Built Technology (Streetlights, EV Chargers, Other Street Furniture) Analysis- Final Report, Energeia, 15 August 2024.

Based on feedback from AEMO to the draft determination, the Commission has made minor adjustments to the final rules to provide that type 8A and 8B meters will be able to be used at large and small customer premises (type 8A meters at large customer premises and type 8B meters at small customer premises), and type 9 meters will only be able to be used at primary connection points for street lighting and street furniture. These changes aim to make it easier for AEMO to develop corresponding procedures and for market participants to interpret these arrangements.

The meter types will have the following characteristics:

- Type 8A meters:
  - Permitted for use at secondary settlement points (SSPs) and primary connection points in large customer premises e.g. EV charger at a SSP.
  - In-built measurement devices and external measurement devices will be considered a meter for the purposes of this meter type (if they meet requirements set out in the NER, including pattern approval by the National Measurement Institute).
  - Accuracy limit of plus or minus 1.5 per cent.
  - Volume limit of 750 MWh per annum at the connection point (to use their in-built functions for measuring energy flow, data storage, remote communications, and time as metered data for settlement in Market Settlement and Transfer Solution (MSATS).<sup>161</sup>
- Type 8B meters:
  - Permitted for use at SSPs in small customer premises e.g. EV charger at a SSP.<sup>162</sup>
  - In-built measurement devices and external measurement devices will be considered a meter for the purposes of this meter type (if they meet requirements set out in the NER, including pattern approval by the National Measurement Institute).
  - Accuracy limit of plus or minus 2 per cent.
  - Volume limit of 750 MWh per annum at the connection point (to use their in-built functions for measuring energy flow, data storage, remote communications, and time as metered data for settlement in MSATS).<sup>163</sup>
- Type 9 meters:
  - Permitted for primary connection points for public street lighting and street furniture.<sup>164</sup>
  - In-built measurement devices and external measurement devices will be considered a meter for the purposes of this meter type (if they meet requirements set out in the NER, including pattern approval by the National Measurement Institute).
  - Accuracy limit of plus or minus 1.5 per cent.
  - Volume limit of 750MWh per annum at the connection point (to use their in-built functions for measuring energy flow, data storage, remote communications, and time as metered data for settlement in MSATS).
  - May include a central management system (CMS) for collection of data from multiple connection points where AEMO, in consultation with the MC, determines that the metering installation meets the conditions for a type 9 metering installation in the metrology procedures.

<sup>161</sup> This is consistent with the annual volume limit for a type 4 meter.

<sup>162</sup> Type 8B meters cannot be used as the primary meter at a small customer's premises.

<sup>163</sup> This is consistent with the annual volume limit for a type 4 meter.

<sup>164</sup> We note that some stakeholders suggested that other small loads such as parking sensors and CCTV cameras could be included in the new metering arrangements. The Commission notes that devices that meet the meter specifications, are pattern approved and function in accordance with Chapter 7 will be considered a type 9 meter for settlement purposes.



#### Figure 5.1: Type 8A, 8B, and 9 similarities



Source: AEMC.

#### Multiple streetlights will be able to be aggregated under one NMI

During the consultation, stakeholders noted that the cost of establishing NMIs would make it impractical to have one NMI per streetlight and supported the ability to aggregate multiple lights to one NMI, noting that streetlights have historically been grouped.<sup>165</sup> Energy Queensland noted that to avoid issues with settlement, any aggregation of streetlights should be limited to one type of asset and to the same Transmission Node Identifier (TNI).<sup>166</sup>

Noting this stakeholder feedback, the final rules will enable multiple streetlights and street furniture to be aggregated under one NMI. To enable this, the definition of a meter installation in Chapter 10 of the NER has been amended to include a CMS. This will allow streetlights to be aggregated through a CMS with a singular NMI and enable the CMS (rather than the individual streetlights) to be treated as a metering installation. Box 1 provides more detail on the aggregation of minor loads under a single NMI.

AEMO procedures will be updated and provide guidance about how to best accommodate multiple streetlights under one NMI for settlement purposes. AEMO notes that customers transitioning from calculated type 7 metering installations to type 9 metering installations should do this in collaboration with AEMO to prevent inadvertent double-counting.<sup>167</sup>

AEMO procedures will also provide that where individual measurement components break within lights, they will not need to be replaced immediately if the accuracy of the CMS itself remains within plus or minus 1.5%. This option was determined to be less complex than enabling streetlights to revert to a type 7 metering arrangement, which would require the streetlights to already be registered on the NEM load un-metered loads table.

<sup>165</sup> Submissions to draft determination: AGL, p. 6; Energy Queensland, p. 10; Evoenergy, p. 4; IPWEA, p. 4.

<sup>166</sup> Submission to draft determination: Energy Queensland, p. 10.

<sup>167</sup> Submission to draft determination: AEMO, p. 5.

#### Box 1: Aggregation of minor loads under a single national meter identifier (NMI)

Under the NER, meters require a single NMI. However, for type 7 streetlights and street furniture where the electricity load is generally minor, the metrology procedures allow for multiple lights to be aggregated under the one NMI.

DNSPs have advised that this is common practice and that the number of lights aggregated under one NMI can vary significantly between DNSPs and between customers (or, in most cases, between councils).

The final rule continues this practice for streetlights and street furniture with type 9 meters, which can be aggregated via a central management system. Refer to Appendix E for more details.

Source: AEMC

#### 5.2.2 Market functionality (roles and responsibilities)

Taking into account stakeholder feedback and the Commission's criteria, the Commission has determined to retain the draft position and make minor changes to accreditation requirements for MPs and MDPs and roles and responsibilities for MCs, MPs, and MDPs for type 8A, 8B, and 9 meters.

#### The rules make minor changes to MP responsibilities to account for the meter being in-built

In its rule change request, AEMO proposed establishing new accreditation categories for MPs and MDPs for the provision of services within private metering arrangements and minor energy flow metering installations. This included providing a mechanism for the MP to enable the assessment and application of an equivalently accessible display as contemplated by NER clause 7.8.2(a).

Based on stakeholder feedback and consideration of existing arrangements, the Commission has determined to retain the draft position and make minor changes to the MP role and responsibilities.

The final rule amends NER clauses 7.3.2 and S7.2.2(a) to reflect that customers may provide type 8A and 8B metering installations such as EV chargers themselves (including legacy devices), in which case the MP will be responsible for commissioning and maintaining the installation, but not providing or installing it.

This change accounts for the fact that for these new meter types, the metering component may be internal to the CER device and/or already installed and 'installation' of the meter may not be appropriate. Commissioning allows the MP to ensure that the meter has been installed correctly, functions, and transmits data to AEMO appropriately. It is expected that AEMO will make appropriate updates to its accreditation categories and guidelines for accrediting MPs and MDPs.

#### MC, MDP, and MP roles will be contestable for type 8A, 8B, and 9 meters

Taking into stakeholder feedback and the Commission's assessment criteria, the Commission has determined to retain the draft position that MP, MC, and MDP roles will be contestable for type 8A, 8B, and 9 metering installations.

The Commission considers that this position balances the need for competition for these services and the desire to enable uptake of type 9 meters for technology such as streetlights. DNSPs can offer these services through their ring-fenced contestable service businesses, noting that many DNSPs own and operate streetlights and may want to perform metering roles for streetlights.

The Commission notes that stakeholders provided mixed views in response to the draft determination. Several stakeholders expressed support for the MP having a role in installing, commissioning, and managing type 8 and 9 devices with in-built metering.<sup>168</sup> PIAC and Master Electricians Australia submitted that both DNSPs and third parties such as private electricians should be allowed to perform metering roles.<sup>169</sup> Some DNSPs expressed concerns about third party MPs installing type 8 and 9 meters, working on DNSP assets, and providing safe and reliable network services.<sup>170</sup> Others pointed to the ways in which the arrangements will interact with jurisdictional arrangements.<sup>171</sup>

DNSPs expressed mixed views about whether the MC role should be contestable. Some opposed on the basis that DNSPs should have this role for streetlights that they own, that DNSPs have the skills to maintain them safely, and allowing third parties to perform this role would create additional cost, complexity, and safety risks.<sup>172</sup> Energy Queensland noted that "delegating the deployment of smart cells to a DNSP's ring-fenced contestable service provider, as proposed in the AEMC's Draft Determination, would undermine the purpose of this key area of the AEMC's proposed rule change, because it would result in a fragmented and inefficient approach."<sup>173</sup> DNSPs also raised concerns about whether they would be able to obtain waivers from the AER under the Ring-fencing Guideline. Some DNSPs supported making the roles contestable, noting that they would not be interested in performing metering roles for streetlights.<sup>174</sup>

Noting DNSP concerns that allowing contestability may make it more costly or delay the uptake of type 9 meters for streetlights, the Commission considers that the AER is best placed to assess the costs and benefits associated with enabling competition for these roles. If a DNSP wants to deliver these services, a DNSP will be able to apply for an individual or class waiver under the <u>Ring-Fencing Guideline</u>.<sup>175</sup> The Commission also notes that we expect that the implementation time frame for this rule change will provide DNSPs with adequate time to navigate the ring-fencing waiver process.

<sup>168</sup> Submissions to draft determination: Ausnet, p. 3; Evoenergy, p. 4; Intellihub, p. 7; PLUS-ES, pp. 7-8; PIAC, p. 7; Vector Metering, p. 6.

<sup>169</sup> Submissions to draft determination: Master Electricians Australia, p. 6; PIAC, p. 7.

<sup>170</sup> Submissions to draft determination: Energy Queensland, p. 2; Energy Networks Australia, p. 3; Essential Energy, p. 3; PLUS-ES, pp. 8, 11; Tas Networks, p. 3.

<sup>171</sup> Ausnet noted that under Victoria's public lighting code, DNSPs will have to provide the metering provider services to Councils or other authorities as an Alternative Control Service (Submission to draft determination p. 4; Energy Queensland noted that Queensland's Electrical Safety Regulation 2013 and DNSP safety requirements may increase barriers for new market entrants (Submission to draft determination, pp. 10-11.

<sup>172</sup> Submissions to draft determination: Citipower Powercor & United Energy, p. 2; Energy Networks Australia, p. 3; Energy Queensland, p. 2; Essential Energy, p. 3; SA Power Networks, p. 8; Tas Networks, p. 3.

<sup>173</sup> Submission to draft determination: Energy Queensland, pp. 5-6.

<sup>174</sup> This feedback was provided through meetings with stakeholders in industry working groups in November 2023.

<sup>175</sup> Under Clause 5 of the Guideline, the AER can grant either separate waivers to individuals DNSPs or group of DNSPs. It can also grant interim waivers to apply when it is considering a DNSP request for a waiver. Further it can introduce class waivers applicable to all DNSPs to apply to a particular circumstance. For example, for regional and remote areas, where there are likely to be fewer or no other service providers.

#### 5.2.3 Technical requirements

In response to the draft determination and directions paper, stakeholders provided a range of feedback regarding metering requirements and minimum service specifications.

Many noted that meters should not be required to have a physical display and to allow metering data to be accessed via an alternative source (e.g. smartphone or in-home display accessible to consumers).<sup>176</sup>

There were mixed views on the need for a flow limit. Master Electricians Australia and Intellihub indicated support for the 750 MWh limit for type 8 meters.<sup>177</sup> Others considered that a per annum model and flow limit for type 8 and 9 meters was not needed.<sup>178</sup> Some expressed concern that the flow limit and 2 per cent accuracy limit for type 8 meters could cause issues with settlement.<sup>179</sup> Several noted that metering specifications should align with established international standards.<sup>180</sup> In relation to frequency of AEMO reviews of metering requirements and minimum specifications, some recommended that it be done on a case by case basis (for example, when the procedures are a barrier to a new technology or when applications to assess modification are made).<sup>181</sup> Others noted that in the early years of implementation, AEMO should conduct the reviews frequently, for example every two years.<sup>182</sup>

The Commission has considered this feedback and determined to retain the draft position in relation to these matters, as outlined in detail below.

#### AEMO will set metering requirements and minimum service specifications for type 8A, 8B and 9 meters

The final rules provide that AEMO will have responsibility for setting metering requirements and minimum service specifications,<sup>183</sup> inspection and testing requirements (under an asset management plan),<sup>184</sup> and procedures for meter installation and maintenance. This will enable AEMO to conduct further consultation to ensure that minimum service specifications are adequately tailored and flexible to support the uptake of CER devices with in-built measurement capability. It will also enable requirements and specifications to respond to advancements in measurement capability in technology over time.

Consistent with AEMO's rule change request, these meter types will likely be subject to lower minimum service specifications and be exempt from minimum service specifications under Schedule 7.5 of the NER, to make it easier and cheaper for these meters to be taken up, such as for EV chargers. The final rules also extend requirements for electronic data transfer facilities and facilities for storing interval energy data under clause 7.8.2 of the NER for type 8A, 8B, and 9 meters.

To ensure that these meter types meet minimum standards, the final rules will require AEMO to set out the minimum service specifications in their procedures having regard to the principle that a service provided by a type 8A, 8B or 9 metering installation must:

<sup>176</sup> Connected Light Solutions noted that "most lighting control systems have the ability to report on real-time energy consumption but cannot be used in Australia due to current AEMO process and some regulations on meters, most noticeably [the] requirement for a display which is irrelevant when mounted many metres in the air", Submission to directions paper, p. 1.

<sup>177</sup> Submissions to draft determination: Intellihub, p. 7; Master Electricians Australia, p. 6.

<sup>178</sup> Submissions to draft determination: Evoenergy, p. 4; IPWEA, p. 3, PLUS-ES, p. 7.

<sup>179</sup> Submissions to draft determination: EnergyAustralia, p. 11; Energy Queensland, p. 10.

<sup>180</sup> Submissions to draft determination: Clean Energy Council, p. 3; IPWEA, p. 5.

<sup>181</sup> Submissions to draft determination: AEMO, p. 5; Ausnet, p. 3; Evoenergy, p. 4, Intellihub, p. 7; PLUS-ES, p. 8.

<sup>182</sup> Submissions to draft determination: IPWEA, p. 4; Master Electricians Australia, p. 6.

<sup>183</sup> Clause S7.5.2 of the NER.

<sup>184</sup> Clause S7.6.1 of the NER.



- comply with any applicable requirements of the National Measurement Act 1960 (NMA)
- provide for the recording of sufficient historical data consistent with current requirements of the NER
- provide for the remote retrieval of metering data
- provide for interval energy data to be prepared and recorded in intervals which correspond to a trading interval.

#### Meters will no longer require a physical display

The final rules amend clause 7.8.2 of the NER to allow a meter display, including that of a type 8A, 8B, or 9 meter, to be provided by means of a device contained within the meter or, by some other means, made readily available to the customer with no delay.

We did not receive any additional feedback and taking into account feedback from the directions paper, the Commission agrees that this approach reflects changing consumer preferences towards digitisation and allows for a greater cross-section of technologies to be included, and is more practical for devices like streetlights.

### Type 8A, 8B and 9 meters will need to be pattern approved by the National Measurement Institute

Type 8A, 8B, and 9 meters will require pattern approval from the National Measurement Institute in accordance with the NMA.

The Commission regards pattern approval as a core standard in meter quality assurance and a crucial requirement to give industry and consumers alike confidence in the continued accuracy of their meters. The requirement to obtain pattern approval is discussed further below under implementation considerations.

#### Type 8A, 8B and 9 meters will have a volume limit of 750MWh per annum at the connection point

The Commission has determined that it is appropriate to retain the flow limit proposed in the draft determination. A flow limit is required to provide a baseline from which AEMO can construct requirements for the metering system, ensure the link between a NMI, customer, FRMP, transmission node, and other common features and requirements and remain within the required accuracy class. Global settlement rules will also be able to reconcile any issues with settlement.

### MCs for type 8A, 8B, and 9 meters will be able to propose alternative testing and inspection arrangements

The Commission has considered stakeholder feedback and has determined to retain the draft position to allow the MCs for type 8A, 8B, and 9 meters to propose alternative testing and inspection arrangements to AEMO for approval through an asset management strategy. As is current practice, AEMO must approve an asset management strategy before the relevant MC can install these meters.

Given the likelihood of a range of CER devices being used under type 8B, the Commission anticipates that there may be some differences in the inspection and testing requirements between the meter types.

The Commission expects that AEMO will provide guidance in its procedures on preparing asset management strategies for different technologies that form type 8A, 8B, and 9 meters.

The Commission considers the benefits of this approach include:

- Practicality and lower costs for consumers physical inspection and testing can range in cost. However, where measurement capability embedded in the primary device is subject to inspection and testing requirements, the costs can outweigh the benefits. In-built measurement components may be difficult to access because they are internal to the device and not necessarily designed to be accessed after manufacturing. For streetlights, in particular, accessing the metering capability to undertake testing may require hiring expensive machinery to access the light suspended many metres above a road. As noted, this cost will likely outweigh the cost savings of measuring energy flow.
- Less complexity This approach allows for more flexibility for MCs using these meter types. Rather than AEMO or the rules setting a blanket requirement on what is and isn't allowed for inspection and testing requirements, this allows for AEMO's procedures to be responsive to changes in technology.
- Tailored solutions for the technology type which may include sample testing, remote testing or other innovative solutions. This flexibility can accommodate future technologies.

This position is consistent with stakeholder feedback. Stakeholders have expressed support for tailored inspection and testing requirements citing costs, practicality, and the likely variation between CER devices with in-built measurement capability.<sup>185</sup> IPWEA noted that physical inspection requirements would be particularly impractical for streetlights and that "inspection of performance should more appropriately take place via the central management."<sup>186</sup>

Some stakeholders raised concerns regarding implementation of this approach, including that MDPs testing and inspecting devices may void manufacturer warranties,<sup>187</sup> and that the cost of accessing these devices for testing and may be high and will be passed onto consumers.<sup>188</sup>

The Commission recognises that it may take time for market participants to work through implementation considerations, but that retailers and metering parties should be able to manage these risks through their contractual arrangements and as part of asset management strategies. The Commission also encourages AEMO to consider opportunities to streamline the preparation of asset management strategies, by publishing common strategies used by different devices (i.e. inspection and testing strategies for EV chargers with in-built measurement capability).

#### AEMO will take into account international standards in setting requirements and specifications

The Commission expects that AEMO will take into account international standards, consumer and manufacturer cost impacts, and flexibility for the inclusion of new and emerging technologies in setting requirements and specifications. The Commission recognises that aligning with existing standards will support cheaper and faster uptake of this technology, and is committed to supporting the uptake of technology with in-built measurement capability to the extent possible.

<sup>185</sup> Submissions to directions paper: Intellihub, p. 2; IPWEA, p. 9; Master Electricians Australia, p. 10; NSW Joint DNSPs, p. 7; PIAC, p. 10

<sup>186</sup> Submission to directions paper: IPWEA, p. 9. This was echoed by the Australian Smart Communities Association and several councils who made submissions in support of the IPWEA submission.

<sup>187</sup> Submission to draft determination: Australian Energy Council, p. 1.

<sup>188</sup> Submission to draft determination: Australian Energy Council, p. 1.

#### 5.2.4 Implementation considerations

Key changes required to implement these arrangements include:

- changes to DNSP, MDP, and retailer IT systems to account for the new meter type arrangements
- updates to AEMO procedures, primarily Metrology Procedures, Service Level Procedures, and accreditation requirements for metering providers for the new proposed meter types
- · coordinated testing and consultation with AEMO and multiple participant types.

See further information about implementation considerations outlined in chapter 7.

#### 5.3 Additional considerations

#### Pattern approval process with the National Measurement Institute

The Commission recognises that the National Measurement Institute pattern approval requirements and process will be critical to enabling and not posing barriers to the uptake of type 8A, 8B, and 9 meters.<sup>189</sup>

In response to the draft determination, the Electric Vehicle Council expressed concern that the National Measurement Institute may impose standards on EV charging equipment that are complex, inconsistent with current industry standards, and will inhibit the uptake of in-built measurement capability in technology such as EV chargers.<sup>190</sup>

Landis & Gyr submitted that requiring EV charging equipment to have two pattern approved meters, one for energy taken from the network and a secondary meter for energy delivered to the customer, would be complex and not in the best interests of the market and consumers.<sup>191</sup>

The Commission has raised these concerns with the Commonwealth Department of Climate Change, Energy, the Environment and Water, and they have noted that similar issues are being considered as part of delivering an ecosystem for nationally consistent CER standards under the National CER Roadmap, and related work by government.

#### Settlement matters related to streetlights

In response to stakeholder feedback regarding settlement, the Commission notes that:

- The energy used by smart cells (versus energy used for lighting) should be accounted for as part of distribution loss factors (DLF) for streetlights for un-metered use of systems. If this energy isn't accounted for in this way, the unaccounted for energy calculated by AEMO will account for this energy.
- Where a streetlight and its controls are used for multiple assets (e.g. streetlight, NBN cabinet) owned and operated by different customers, each asset will need be metered separately and will need to be linked or aggregated to a separate NMI linked to the relevant customer.

AEMO will provide more detail regarding how this arrangement will work in practice in its NMI Procedures.

<sup>189</sup> During consultation, several stakeholders noted that the success of the new meter types will depend on whether original equipment manufacturers get pattern approval from the National Measurement Institute. See the National Measurement Institute's website for more information on pattern approval standards here. More information on international standards is also available from the International Organisation of Legal Metrology under OIML G22 Electric Vehicle Supply Equipment (EVSE).

<sup>190</sup> Electric Vehicle Council is concerned that no other country is using OIML G22, no manufacturers are building to this standard and, the way national metering authorities determine implementation of this standard may not align if other countries adopt it too (Submission to draft determination: Electric Vehicle Council, p. 4).

<sup>191</sup> Submission to draft determination: Landis & Gyr, p. 1.

### **6** Our regulatory impact analysis of the rule change

The Commission has undertaken a regulatory impact analysis for this rule determination and more preferable final rules. As part of our regulatory impact analysis, the Commission engaged Energeia to conduct a comprehensive cost-benefit analysis of the final rules. Energeia's analysis demonstrates that this rule change could deliver benefits to small and large consumers taking up CER and the broader consumer base, at relatively low cost to the system.

This chapter summarises:

- how we conducted our regulatory impact analysis
- the findings of Energeia's cost-benefit analysis of the rule change.<sup>192</sup>

#### 6.1 We conducted a regulatory impact analysis of the rule change

#### We considered a range of policy options

The Commission compared a range of viable policy options within our statutory powers: the rule proposed in the rule change request; a business-as usual scenario where we do not make a rule; and more preferable rules allowing consumers to more easily separate and manage flexible loads, use flexible CER in different ways, and make use of in-built measurement capabilities of CER devices. These options are described in Chapter three of the final determination.

#### We identified who would be affected and assessed the benefits and costs of each policy option

The Commission's regulatory impact analysis for this rule change used qualitative and quantitative methodologies. It involved identifying the stakeholders impacted and assessing the benefits and costs of policy options. The depth of analysis was commensurate with the potential impacts. Where commensurate and feasible, the Commission has quantified the impacts. The Commission focused on the types of impacts within the scope of the NEO and NERO. Based on this regulatory impact analysis, the Commission evaluated the primary potential costs and benefits of policy options against the assessment criteria. The Commission's determination considered the benefits of the options minus the costs. The regulatory impact analysis is summarised at appendix B.

#### 6.2 Energeia estimated the costs and benefits of the rule change

To conduct its analysis, Energeia modelled the rule change in two parts:

- 1. Costs and benefits, and how many CER devices need to participate for benefits to exceed costs associated with arrangements for:
  - flexible trading with multiple energy service providers at large customer premises
  - unlocking the value of flexible CER for small customers.<sup>193</sup>
- Costs and benefits associated with arrangements for measuring energy flows from in-built technology (see section 6.5).<sup>194</sup>

<sup>192</sup> Benefit Analysis of Load-Flexibility from Consumer Energy Resources: Final Cost-Benefit Analysis, Final Report, 15 August 2024 (Energeia report 1), and Measuring Energy Flows from In-Built Technology (Streetlights, EV Chargers, Other Street Furniture) Analysis - Final Report, 15 August 2024 (Energeia report 2).

<sup>193</sup> Energeia report 1

<sup>194</sup> Energeia report 2.

# 6.3 Flexible trading at large customer premises and unlocking the value of flexible CER for small customers

This section outlines how Energeia modelled benefits of flexible trading at large customer premises and unlocking the value of flexible CER for small customers and what it found.

#### 6.3.1 Modelling approach

This section outlines the process that Energeia undertook to develop its model to analyse the costs and benefits associated with the rule changes for small and large customers.

#### Energeia scoped technologies to be included

Energeia's first step was to conduct desktop research and hold meetings with subject matter experts. Based on this research, the AEMC and Energeia agreed on the technologies to be included in Energeia's analysis based on the scale of the CER device's load and the ease with which customers can use the CER device flexibly. The agreed CER devices included in Energeia's analysis are:

- water heating for small and large customers
- solar PV for small and large customers
- pools and spas for small customers
- batteries for small and large customers (10 kWh and 150 kWh respectively)
- EV charging (and discharging to grid) for small customers
- ventilation for large customers
- refrigeration for large customers.<sup>195</sup>

#### Energeia identified potential benefit streams from these technologies

Energeia identified what elements of the electricity market that the technologies could impact and identified that the relevant benefit streams are:

- 1. reduced wholesale market/electricity generation costs
- 2. reduced frequency control ancillary services (FCAS) prices costs
- 3. distribution network cost savings
- 4. transmission network cost savings
- 5. emissions reduction benefits.<sup>196</sup>

Energeia implemented an algorithm in its modelling that allows CER devices to respond to wholesale, distribution, or transmission cost drivers.<sup>197</sup>

#### Benefits that have not been accounted for

There are other factors that could increase the market benefits and the benefits for nonparticipating customers. The factors listed below were not incorporated in Energeia's analysis, as they were determined to be too complex and difficult to quantify for the purposes of this cost-benefit analysis:

<sup>195</sup> Energeia report 1, p. 26; Energeia, Benefit Analysis of Load-Flexibility from Consumer Energy Resources: Methodology Report, 3 August 2023, p. 22.

<sup>196</sup> Energeia report 1, pp. 29-32.

<sup>197</sup> There are no specific responses to FCAS or emissions reduction. Energeia modelled contingency FCAS that is often unused, and any emissions reduction signals are likely to come indirectly through the wholesale market.

- Competition, particularly for large customers: this rule change supports competition in the energy retail sector by making it easier for consumers to separate their flexible load from their inflexible load, to have visibility of the value of their CER, by making it easier for large customers to engage multiple FRMPs at their premises, and reducing the barriers to entry and associated costs for retailers and other energy service providers.
- Innovation: due to this rule change a wider range of options for CER device management may become available (i.e. different energy products and service offerings), as well as better opportunities for innovation in technology with in-built metering.
- Certainty, particularly for large customers: implementing a rule change provides greater certainty to large customers relative to the embedded network framework large customers use today.
- Locational variation in network costs driving opportunities for network demand management and cost reflective pricing.<sup>198</sup>

#### **Modelling limitations**

Energeia and the AEMC agreed on trade-offs to balance the model's simplicity and accuracy. The Commission considers that these limitations are unlikely to have a material impact on model results and are conservative in nature, as they are likely to bias net benefits downward. Key limitations associated with this model are that it:

- Relies on first order impacts such as the direct impact of CER in offsetting network investments. It does not look at second order impacts such as how increased participation by flexible CER would impact the wholesale price, or how additional benefits to CER owners could increase or speed up CER adoption.
- Applies an hourly resolution (i.e. the benefits of wholesale market interactions may be understated by the reduced volatility relative to 5-minute pricing intervals in practice).
- Is susceptible to load homogeneity (i.e. the model builds customer impacts based on an existing representative customer which may exaggerate peak and minimum demand).
- Uses network-wide average costs, which is unbiased for overall benefits estimates but on a device-type basis may make it appear as though any adoption would reduce benefits, when it would increase benefits in parts of networks with large potential network cost savings from participation.<sup>199</sup>

#### Modelling scenarios and associated costs

Energeia built a CER flexibility optimisation tool to model how the selected technologies would respond to signals and their impacts on benefit streams.<sup>200</sup> AEMC worked with Energeia to define the scenarios to compare with the status quo.<sup>201</sup> The sensitivity test scenarios are summarised in Table 6.1 and Table 6.2.<sup>202</sup>

<sup>198</sup> Energeia report 1, p 32.

<sup>199</sup> Energeia report 1, pp. 36.

<sup>200</sup> Energeia report 1, p 14.

<sup>201</sup> The status quo being the following existing arrangements (i) Large customers to set up embedded networks within a single customer's premises, allowing a separate financially responsible market participant (a retailer or SGA) manage the CER device at the child connection point to trade on the wholesale market and participate in network service agreements (which may include sharing the child connection point metering data with the distribution network), (ii) Small customers to engage an agent (i.e. a retailer) to control the customer's CER device to trade on the wholesale market and may participate in network service agreements (which may include sharing data from in-built metering or a standalone revenue grade meter with the distribution network).

<sup>202</sup> All sensitivity test scenarios assume that the customer (or their agent such as a retailer) is using the device to trade on the wholesale market and participate in network demand management programs. Energeia did not double count the costs and benefits in the sensitivity tests.

#### Table 6.1: Model scenarios for flexible trading at large customer premises

Sensitivity test scenarios (Energeia scenario	What are the key features of the scenario?
name)	
The status quo, using existing arrangements under the embedded network	Large customers engage embedded network managers to install metering and allocate NMIs at child connection points. Large customers can engage separate a financially responsible market participant at child connection points (a retailer or SGA) and may provide ancillary network services.
Base case (our final rule)	Large customers engage NMI service providers to NMIs to their CERs' in built metering creating secondary settlement points. Large customers can engage a separate financially responsible market participant at secondary settlement points and provide network services. The rule change requires system upgrades for NMI service providers, retailers and AEMO.
Base case with DNSP NMI allocation (our draft rule)	Large customers request the NMI from their DNSP to allocate NMIs to their CER devices' in built metering creating secondary settlement points. Large customers can engage separate financially responsible market participant at secondary settlement points and provide network services. The rule change requires system upgrades for DNSPs, retailers and AEMO.
Best case with lower system costs relative to the base case	Large customers engage NMI service providers to NMIs to their CERs' in built metering creating secondary settlement points. Large customers can engage separate financially responsible market participant at secondary settlement points and provide network services. The rule change requires system upgrades for NMI service providers, retailers and AEMO (in this sensitivity test the system upgrade costs for retailers and AEMO are belowd, relative to Energeia's base estimate)
Best case with supporting potential reforms.	This is the same as the base case, with devices also participating in dispatch through our integrating price responsive resources rule change and networks applying dynamic prices. Networks incur additional system upgrade costs to apply dynamic prices.

Source: Energeia Report 1, p. 6.

Table 6.2:Model scenarios for unlocking the value of CER for small customers		
Scenario (Energeia scenario	What are the key features of the scenario?	
The status quo (i.e. an existing retailer VPP product/service)	A retailer VPP uses in built metering and control in the CER device (which does not have an associated National Metering Identifier) to trade on the wholesale market and participate in network services.	
	To participate in network services some proportion of customers need additional standalone revenue metering (discussed in the sensitivity test scenarios below).	
Base case (our final rule)	A retailer VPP uses in built metering and control in the CER device to trade on the wholesale market and participate in network services.	
	Small customers engage NMI service providers to allocate NMIs to their CERs' in built metering creating secondary settlement points. This sensitivity test assumes one in four CER devices avoids a standalone meter to participate in network services. The rule change requires system upgrades for NMI service providers, retailers and AEMO.	
Base case with DNSP NMI allocation	A retailer VPP uses in built metering and control in the CER device to trade on the wholesale market and participate in network services.	
	Small customers request that their DNSP allocate NMIs to their CERs' in built metering creating secondary settlement points.	
	The small customer requests a NMI from the DNSP for the in built metering which secondary settlement point.	
	This sensitivity test assumes one in four CER devices avoids a standalone meter to participate in network services. The rule change requires system upgrades for the DNSP, retailers and AEMO.	
Best case with lower system costs relative to the base case	A retailer VPP uses in built metering and control in the CER device to trade on the wholesale market and participate in network services.	
	Small customers engage NMI service providers to allocate NMIs to their CERs' in built metering creating secondary settlement points.	
	This sensitivity test assumes three in four CER devices avoids a standalone meter to participate in network services.	
	The rule change requires system upgrades for NMI service providers, retailers and AEMO, - in this sensitivity test the system upgrade costs for retailers and AEMO are halved, relative to Energeia's base estimate.	
Best case with supporting potential reforms in train	This is the same as the base case, with devices also participating in dispatch through the IPRR rule change and networks applying dynamic prices for devices.	

Source: Energeia Report 1, p. 6.
# 6.4 Findings - Flexible trading for large customers and unlocking the value of flexible CER for small customers

Energeia's key findings in relation to rule change arrangements for small and large customers are:

- The system costs associated with this rule change are relatively small and for the benefits to
  match the associated implementation costs in the best case scenario, only 16 percent of CER
  devices need to participate at secondary settlement points. The majority of these costs will be
  borne by consumers who choose to take up the arrangements rather than the broader
  consumer base.
- The rule change will deliver benefits to consumers who participate in CER flexibility primarily through avoided metering costs, noting that other benefits such as competition, innovation and certainty were not quantified.
- For small and large customers participating with flexible CER, the rule change will deliver benefits through reduced metering costs as a result of using a type 8A or 8B meter instead of an additional metering installation, where this is required by a DNSP.
- For consumers who do not have CER, this rule change could deliver benefits through lower wholesale and FCAS costs, as a result of CER devices participating in dispatch (through mechanisms under the IPRR rule change if made) and by networks offering cost-reflective pricing.

#### 6.4.1 The cost of implementing the rule change is relatively low

Energeia estimates that key implementation costs associated with this rule change will be for upgrades to AEMO systems, retailer systems, metering coordinator systems, and for NMI allocation costs. These are summarised at Table 6.3.

Energeia's analysis indicates that rule change costs under the base case are likely to be:

- \$0.49 per customer (all customers in the NEM) per year to fund AEMO system upgrades.
- \$30 upfront and around \$0.99 annually per SSP for customers (or their agents) that obtain SSPs for their CER devices.<sup>203</sup>
- \$0.49 per year for customers with retailers that offer SSPs, noting that retailers may absorb this or pass it on to customers with SSPs.<sup>204</sup>

<sup>203</sup> The AEMC considers that system upgrade costs (reflected in the annual costs) would be unnecessary for NMI service providers if few CER devices use secondary settlement points. This may be offset by higher upfront costs.

<sup>204</sup> The AEMC considers that retailers would not need to undertake system upgrades if a small number of customers take up SSPs.

	Energendo co		inder unterent sens	intry test secharios	
Category	Base case	Base case with DNSP NMI alloca- tion	Best case	Base case with supporting re- form	Who bears the cost?
AEMO systems	\$5.2 million per year	\$5.2 million per year	\$2.6 million per year	\$5.2 million per year	All customers
Retailer systems	\$5.2 million per year	\$5.2 million per year	\$2.6 million per year	\$5.2 million per year	Customers of participating retailers
NMI service provider systems	\$10.0 million per year		\$10.0 million per year	\$10.0 million per year	CER device owner or retailer
DNSP systems		\$17.1 million per year		\$17.1 million per year	All customers
NMI allocation costs	\$30 per NMI	\$90 per NMI	\$30 per NMI	\$30 per NMI	CER device owner or retailer
Device certification	Negligible	Negligible	Negligible	Negligible	CER device owner
Device system changes	Negligible	Negligible	Negligible	Negligible	CER device owner
Metering costs	\$16 per meter per year <sup>Note</sup>				

Table 6.3: Energeia's estimated costs under different sensitivity test scenarios

Source: Energeia Report 1, pp. 7-9.

Note: For small customers, Energeia models that between 25% and 75% of small customers need standalone metering to provide network services.

#### Adjusted cost estimates based on stakeholder feedback

- DNSP system costs: Based on further engagement with distribution networks and internal analysis, Energeia estimated that, on average, a DNSP's system upgrade would cost \$17.1 million.<sup>205</sup>
- NMI service provider NMI allocation and system costs: Based on stakeholder feedback and internal analysis, Energeia has included the proposal for a NMI service provider to allocate the NMI for the SSP in its scenarios.<sup>206</sup>

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<sup>205</sup> DNSPs noted in submissions to the draft determination that requiring DNSPs to allocate NMIs at SSPs would drive significant DNSP system upgrade costs. SA Power Networks noted in its submission an estimated \$28 million in costs to upgrade its enterprise systems; Submission to Draft Determination: SA Power Networks, p. 4.

<sup>206</sup> Energeia assessed that a new role of NMI service provider would charge similar or approximate fees for NMI allocation as embedded network managers currently charge for child connection points. i.e. around \$30 per NMI.

- NMI service provider system costs: Energeia assessed that if there was high uptake of the arrangements (i.e. requiring the allocation of hundreds of thousands of NMIs), system upgrades for parties performing the NMI service provider role would cost \$10.0 million.<sup>207</sup>
- AEMO and retailer system costs: Feedback from AEMO suggested that it may possible to implement the necessary changes at a lower cost.<sup>208</sup> This is reflected in the best case sensitivity scenarios.
- Metering costs: In response to stakeholder feedback, Energeia reduced the proportion of small customers avoiding standalone metering to 25% in the base case and 75% in the best case sensitivity scenario.<sup>209</sup>
- Value of emissions reductions: Energeia updated its value of emissions reductions consistent with the nationally agreed value.<sup>210</sup> The interim value of greenhouse gas emissions reduction was issued after Energeia completed the draft cost-benefit analysis.

More detail on estimated costs is available in Energeia's final report at section 3.1.3.

#### 6.4.2 The rule change will deliver benefits to customers

#### Primary quantified benefits will come from avoided metering costs

Energeia's analysis indicates that by itself, this rule change delivers benefits<sup>211</sup> through avoided metering costs:

- For large customers, all customers that can use in-built metering for their SSPs will avoid metering costs.<sup>212</sup>
- For small customers, any customer that can use in-built metering for the SSP to avoid standalone metering for network services will avoid metering costs.<sup>213</sup>

Energeia's sensitivity testing indicates that the rule change can deliver a net benefit for large customers and for small customers, under the best case (the scenario with half the costs for AEMO and retailers, and three times as many devices avoid additional metering) and the best case scenario with additional reforms (with participation in dispatch and highly cost reflective prices for devices). Figure 6.1 illustrates these findings.

### Benefits will accrue to customers participating in the rule change arrangements and the broader customer base

The benefits outlined above in relation to avoided metering will accrue to customers taking up the rule change arrangements. However, Energeia's analysis indicates that if the rule change enables greater participation in dispatch and cost reflective prices for devices, benefits will flow to all consumers. These benefits would be:

<sup>207</sup> We consider this upgrade cost would only be incurred if there is a large take up of SSPs and that parties could use a manual process at a smaller scale in the way that many embedded network managers currently do. Also, metering coordinators are upgrading systems for other reforms, such as the <u>Accelerating smart meter deployment rule change</u>, and changes related to this rule change and others are likely to align.

<sup>208</sup> Similar to metering coordinators, the range of changes that AEMO is making, including for <u>Accelerating smart meter deployment rule change</u>, has the potential to reduce the cost of individual reforms

<sup>209</sup> In submissions to the draft determination, some DNSPs noted that they do not require customers with CER devices to install additional standalone metering to participate in network services. Submissions to Draft Determination: SA Power Networks, p. 4; Endeavour Energy, p.4.

<sup>210</sup> MCE statement about the interim value of greenhouse gas emissions reduction, 28 February 2024

<sup>211</sup> Energeia estimated net benefits associated with the final rules on a per device basis (i.e. CER device). It used a per device basis because the baseline data from AEMO's 2023 Inputs, Assumptions, and Scenarios Report (IASR) assumes that barriers to CER flexibility have disappeared. This approach was considered preferable to estimating specific take-up assumptions, given uncertainty around consumer willingness to participate.

<sup>212</sup> We note that our rule change may also avoid metering costs for child connection points in embedded networks through creating new metering types in this rule change.

<sup>213</sup> Energeia estimates that this is between 25% and 75% of CER devices.

- Increased CER participation in dispatch through the mechanism envisaged in the IPRR rule changes<sup>214</sup> would lower wholesale and FCAS costs for all consumers.
- DNSPs offering and retailers using cost reflective or dynamic prices for device could lower network costs (and therefore wholesale costs) for all consumers.<sup>215</sup>

More details on the benefits associated with future reforms are detailed at section 6.4.4 and in Energeia's final report.<sup>216</sup>

#### Figure 6.1: Annual net benefit per device under sensitivity scenarios without further reforms.



Source: Energeia Report 1, pp. 7-9.

#### 6.4.3 The rule change can break even if a subset of CER devices participate

Energeia conducted break even analysis to identify how many devices would need to participate for the rule change benefits to exceed fixed costs and per device costs. Energeia found that:

- In the best case scenario and best case scenario with additional reforms,<sup>217</sup> it would be rational for large and small customers to participate and the rule change can break even.
- Figure 6.2 illustrates the number of devices required to break even compared to Energeia's estimate of CER device uptake:<sup>218</sup>
  - In the best case scenario, 16 per cent of CER devices need to participate in the rule change arrangements to break even.<sup>219</sup> This is a similar proportion to the number estimated in the draft report (14 per cent).
  - In the best case scenario with additional reforms, only 2 per cent of CER devices would need to participate for the rule change to break even. This reinforces the findings that the rule change could unlock greater benefits in combination with other reforms.

<sup>214 &</sup>lt;u>Draft Determination, Integrating price-responsive resources into the NEM</u>, p. 21.

<sup>215</sup> Inefficient network and retail pricing inhibits efficient participation in wholesale markets increasing wholesale costs for all customers.

<sup>216</sup> Energeia report 1, pp. 51-59.

<sup>217</sup> three times more small customer CER devices avoid standalone metering and lower AEMO and retailer system upgrade costs and the scenario with additional reforms

<sup>218</sup> Based on device uptake forecast in the Draft 2024 ISP to 2043.

<sup>219</sup> Energeia Report 1, p. 9.

#### Figure 6.2: Under the best case scenarios, the benefits of the rule change may exceed its costs



Source: Energeia Report 1, p. 10.

- In the base case scenarios,<sup>220</sup> it would be rational for large customers to participate (but not for small customers), and the rule change does not break even.
- Figure 6.3 illustrates the number of devices at large customer premises required to break even compared to Energeia's estimate of CER device uptake.<sup>221</sup>
  - It illustrates that there are not enough large devices at large customer premises in the system to meet the uptake required to break even.<sup>222</sup> That is, small customers must participate for the rule change to break even.





Source: Energeia Report 1, p. 10.

<sup>220</sup> full estimated costs of AEMO and retailer system upgrades and 25 per cent of small customer CER devices avoiding standalone metering, with either NMI Service Providers or DNSP NMI allocation.

<sup>221</sup> Based on device uptake forecast in the Draft 2024 ISP to 2043.

<sup>222</sup> Based on device uptake forecast in the Draft 2024 ISP to 2043. See Energeia Report, p. 10.

### 6.4.4 This rule change could unlock significantly greater benefits from CER devices in combination with other CER reforms

Energeia notes that the rule change could unlock significantly more benefits in combination with other reforms, including:

- Enabling CER participation in dispatch, such as through the mechanism envisaged in the IPRR rule change.<sup>223</sup>
- Enabling cost reflective network and retail pricing, which we are investigating in our <u>'Electricity</u> pricing for a consumer-driven future' Review.
- Removing barriers to FCAS being delivered, including inflexible metering requirements (e.g. Market ancillary services specification (MASS)), noting that FCAS is a key value driver for flexible CER.
- Customers agreeing to allow VPP operators greater access to their CER devices (noting that currently, most retailer-led VPPs are limited to around 50 days of operation per year).<sup>224</sup>

Figure 6.4 and Figure 6.5 illustrate the additional value that could be unlocked as a result of this rule change if these additional reforms are pursued. These findings illustrate the importance of the work being undertaken to implement the <u>National CER Roadmap</u>.

### Figure 6.4: Additional CER benefits unlocked from FCAS, cost-reflective network pricing, and greater virtual power plant access to 10kWh batteries (household batteries)



Source: Energeia Report 1, p. 58.

<sup>223</sup> Participation in dispatch is through a VPP or retailer aggregation.

<sup>224</sup> Energeia report 1, pp 56-59.

### Figure 6.5: Additional CER benefits unlocked from FCAS, cost-reflective network pricing, and greater virtual power plant access to large customer ventilation systems



Source: Energeia Report 1, p. 58.

# 6.5 Modelling approach and findings- Measuring energy flows from in-built technology

#### 6.5.1 Modelling approach

Energeia's cost-benefit analysis focused on two technologies:

- smart street lighting with in-built metering
- kerbside electric vehicle chargers with in-built metering. Energeia focused on these technologies due to the estimated benefit associated with uptake and the availability of data to undertake modelling.<sup>225</sup>

To conduct its analysis, Energeia considered two scenarios:

- Base case All new and replacement street lights would use LEDs without smart controls and kerbside EV chargers would need separate metering that aligns with current NER requirements.
- Rule change All new and replacement streetlights would use LEDs with smart controls and kerbside EV chargers would use internal metrology that aligns with the draft determination.<sup>226</sup>

Energeia estimated that the key benefits of this aspect of the rule change would be:

- reduced wholesale costs from the use of dimming technology in street lights and being able to directly measure energy flows from the technology (instead of using an algorithm)
- reduced maintenance costs from the use of dimming technology in streetlights
- reduced CO<sub>2</sub>e emissions from the use of dimming technology in streetlights
- avoided metering and metering installation costs (as a result of being able to use technology with in-built metrology).<sup>227</sup>

Energeia estimated that the key cost drivers of this aspect of the rule change would be:

<sup>225</sup> Energeia report 2, p.3.

<sup>226</sup> Energeia report 2, p 10.

<sup>227</sup> Energeia report 2, pp. 10-12.



- additional capital expenditure for investment in smart streetlights
- AEMO implementation costs associated with updating procedures and managing data flows from technology with in-built metering.<sup>228</sup>

### 6.5.2 The rule change could deliver \$100m in net benefits from measuring energy flows from in-built technology

Energeia's cost-benefit analysis estimates that the rule change could deliver a net benefit of \$100 million in net present value over 20 years. <sup>229</sup> This includes over 262,000 tonnes of CO2 emissions reductions (over 20 years).

By technology type, Energeia has estimated that the rule change could deliver the following benefits:

- \$78 million from smart street lighting with in-built metering
- \$22 million from kerbside electric vehicle chargers with in-built metering.<sup>230</sup>

For smart street lighting, Energeia also found that over 20 years, these benefits would exceed the initial capital expenditure costs of installing higher cost smart street lights and AEMO's implementation costs. These findings indicate that the rule change has the potential to deliver significant benefit to consumers through reduced costs to councils flowing on to residents and will contribute to the NEO and NERO. These findings are summarised at Figure 6.6

More detail on Energeia's findings is available in Energeia's final report.<sup>231</sup>

### Figure 6.6: Costs and benefits for improving metering options for smart street lighting and kerbside EV charging



Source: Energeia Report 2, p. 20.

<sup>228</sup> Energeia report 2, pp. 12-13.

<sup>229</sup> The Commission notes that Energeia's analysis commences from 2023-24, while the rule change will commence from 2026. We consider that the benefits from 2026 will be in a similar order of magnitude. Therefore, we have no concerns about using these results to support our rule change.

<sup>230</sup> Energeia report 2, p. 20.

<sup>231</sup> Energeia report 2.

### 7 Implementation considerations and timing

#### 7.1 Implementation considerations

In April 2024, AEMO released a draft <u>High Level Implementation Assessment</u> (HLIA) for the rule change to provide stakeholders with the opportunity to provide feedback on expected system changes and implementation timing. The Commission has taken into account stakeholder feedback in response to the HLIA, feedback to the rule change publications, and Energeia's analysis to identify:

- changes required to systems and procedures
- costs associated with these changes
- appropriate timing for implementation of the rule change.

#### 7.1.1 Changes to systems and procedures

The final rules have been developed with the aim of minimising changes to market system arrangements and market participant systems. Based on discussions with AEMO and the AER, stakeholder feedback and Energeia's cost-benefit analysis, the Commission has identified that the following changes will be required to implement the final rules:

- Updates to AEMO's Market Settlement and Transfer Solution (MSATS) system, primarily related to the management of secondary NMIs.
- Updates to AEMO procedures, primarily MSATS Procedures, Metrology Procedures, and Service Level Procedures.
- Updates to AER guidelines and platforms, particularly the Network Exemption Guideline, Retail Exemption Guidelines, Better Bills Guideline, and Energy Made Easy (and any other applicable regulatory instruments identified).
- Changes to financially responsible market participant (FRMP) billing systems to account for the existence of secondary settlement points (SSPs).
- Changes to systems of parties performing the NMI service provider role, to account for the provision of services for SSPs.<sup>232</sup>

#### 7.2 Implementation timing

The Commission has considered feedback in relation to the preferred implementation timing of these arrangements, taking into account considerations including the urgency of these reforms and related rule changes, AEMO's work plan for system and procedure changes for other reforms, and time required for AEMO to test arrangements with market participants.

In deciding implementation time frames for the final rules, the Commission has considered feedback from stakeholders to the draft determination and to AEMO's draft HLIA for the rule change, including feedback from the NEM Reform Delivery Committee.<sup>233</sup>

<sup>232</sup> See final electricity rule, amendments to NER chapter 11, and final retail rule, amendments to NERR schedule 3 Part 19.

<sup>233</sup> The NEM Reform Delivery Committee consists of nominees from consumer representatives and representatives of the renewable energy, demand management, and energy efficiency industries. It was established to facilitate collaboration between NEM market bodies and industry to further the <u>National CER Roadmap</u>, including by prioritising and sequencing reform implementation considering interdependencies with a least-cost whole-of-system intent.

In response to the draft determination, stakeholders recommended that the implementation date be extended from the proposed date of 2 February 2026 to between May 2026 to May 2027, to allow market participants to implement system changes and for jurisdictions to implement changes as required to ensure consistency with the final rules.<sup>234</sup>

In response to the draft HLIA, stakeholders also recommended extending the implementation timeframe, ranging from May 2026 to July 2027, on the basis that:

- Consultation on changes to procedures may take longer than originally envisaged, particularly in relation to business-to-business (B2B) procedures.
- Market trial preparations and industry test timeframes should be extended.
- AEMO should consider changes under the Unlocking CER benefits through flexible trading rule change in parallel with the implementation of the accelerated smart meter deployment and changes to the Industry Data Exchange (IDX).

Taking into account this feedback, in May 2024, AEMO released a <u>revised draft HLIA</u> recommending that the implementation date for SSPs and the related new meter types be extended to 1 November 2026. Factors informing AEMO's recommendation include that it would:

- Enable adequate time for consultation with industry before participant development and for participants to undertake market trials.
- Enable adequate time to develop specifications to support participant development.
- Enable further time to develop business to market (B2M) & business to business (B2B) procedure changes.
- Align with current schedule of twice-yearly releases, which aim to support industry planning and delivery.
- Better align with sequencing for implementation of other reforms, such as the '<u>Accelerating</u> smart meter deployment' rule change and the '<u>Integrating price responsive resources into the</u> <u>NEM' rule change</u>.<sup>235</sup>

Throughout the rule change process, the Commission also received feedback from stakeholders that implementation of arrangements related to "measurement of energy using in-built technology" should be prioritised, to enable market participants to take up the arrangements as soon as possible for technology such as smart streetlights and public EV chargers.<sup>236</sup>

Based on this feedback, the Commission has determined that the rule change will be implemented as follows:

- removal of the requirement for meters to have a visible display (to accommodate in-built meters with displays on an app): 29 August 2024
- AEMO guideline and procedure changes: 30 September 2025
- arrangements related to meter type 9: 31 May 2026
- arrangements related to meter types 8A and 8B, SSPs, and changes to the NERR and retail contracts: 1 November 2026.

This means that parties will be able to take up arrangements for in-built metering at primary connection points from 31 May 2026, such as for streetlights and public EV chargers.

Submissions to draft determination: AEC, p. 2, AGL, p. 6, Ausgrid, p. 2, Energy Queensland, p. 8, Essential Energy, p. 3, Intellihub, p. 8, Landis & Gyr, pp. 1-2, Origin Energy, p. 3, Plus-ES, p. 2, Red Energy, p. 3, SA Power Networks, pp. 3-4, Shell Energy, pp. 4-5, Tas Networks, pp. 4-5.

<sup>235</sup> See AEMO's revised draft HLIA, May 2024, pp. 20-23.

<sup>236</sup> Feedback expressed in stakeholder workshops and technical working groups.

Consumers and their agents will be able to use arrangements for SSPs and in-built metering from 1 November 2026.

The rules provide that AEMO's procedure changes must be finalised by 30 September 2025 and that the AER makes changes to relevant guidelines by 1 November 2026. This will enable parties to prepare for and be ready to proceed in accordance with these implementation dates, including by seeking accreditation for type 8A, 8B and 9 metering installations and accreditation to become NMI Service Providers. The AER has indicated that updating these guidelines in accordance with the consultation procedures set out in the NER and NERR will likely require a substantial commitment of resources from the AER.

The Commission appreciates AEMO's work on the implementation assessment and notes that it is important for the final rules to be implemented with consideration of the broader regulatory reform road map, on which the Commission has been working closely with AEMO.

### A Rule making process

A standard 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 (if relevant)
- stakeholders lodge submissions on the draft determination and engage through other channels to make their views known to the AEMC project team, and
- the Commission publishes a final determination and final rule (if relevant)

For this project, due to the complex issues raised in the rule change request and in submissions, we included an additional stage in the process and published a directions paper in August 2023. We extended the time to publish the final determination and final rules to mid-2024. You can find more information on the rule change process on our website.<sup>237</sup>

# A.1 AEMO proposed a rule to introduce flexible trading and a minor energy flow meter

AEMO proposed to introduce flexible trading by enabling consumers to have their CER separately identified, and therefore treated independently in market settlements - allowing consumers to engage with multiple energy service providers if they choose to.

AEMO proposed a model and arrangements to enable more flexible trading. AEMO's proposed model would create new secondary settlement points for CER behind consumers' current meters. AEMO proposed that a consumer could choose to have one secondary settlement point for all of their controllable or flexible resources, while keeping all of their other electrical load measured by their primary settlement point and on a separate contract. Alternatively, a consumer could choose to have individual secondary settlement points for individual devices. In both cases, the proposal was for the arrangements to be made for and by one customer. Under AEMO's proposal, the consumer could contract with more than one financially responsible market participant (FRMP) for individual devices or one for less flexible load and another for their flexible load - or all of their resources could be managed by one FRMP, but with different types of pricing.

AEMO also put forward that current metering requirements would create barriers to the establishment of secondary settlement points. To address this, AEMO proposed establishing a new category of minor energy flow meter in the rules. This metering installation could then be used at secondary settlement points. AEMO also proposed that this new type of meter should also be able to be used for currently un-metered loads, such as streetlights and street furniture.

<sup>237</sup> See our website for more information on the rule change process here

# A.2 The proposal addressed barriers to consumers separating their CER and engaging multiple energy service providers at their premises

AEMO's proposal sought to address barriers to consumers being able to have their CER separately identified and therefore treated independently in market settlements and to consumers to engage with multiple energy service providers if they choose to. In its rule change proposal, AEMO noted barriers that prevent or disincentivise consumers from separating their CER and engaging multiple energy service providers, including:

- existing network policies
- the time it takes to obtain a second connection, costs to consumers, including potential for additional distribution network access chargers
- the practicality of adding the connection (e.g. requirements on size and location of fusing, metering, and other equipment), and
- current metering requirements, which create barriers (namely complexity and costs) to the establishment of secondary settlement points, such as the necessary size of meters in the current rules.

# A.3 AEMO proposed to address these issues by making it easier for consumers to separate their CER, engage multiple energy service providers, and simplify metering arrangements

AEMO recommended a new flexible trading model with secondary settlement points and a new meter type that could be used at secondary settlement points and to measure energy at currently un-metered loads. Its proposal addressed the issues above in the following ways:

- Consumers with CER devices would be able to separate their flexible devices (e.g. pool pump, battery, hot water heater) from their passive load (e.g. lighting, household appliances).
- Consumers with their separately metered CER would have access to different products and services and ways to participate in the market (e.g. wholesale market and network services).
- It would make it easier for large customers to establish secondary settlement points and choose to engage different energy service providers to manage their flexible CER at these points.
- Retailers would have better visibility of the value of flexible CER and could use this to
  participate in the wholesale market, provide network services, and offer different products to
  consumers.
- Assets with in-built metering capability could be used for settlement and billing purposes (subject to National Measurement Institute approval). For example, using equipment inside an EV charger to measure energy would remove the need for a separate meter. Or, measuring energy flows from currently unmetered streetlights would unlock benefits such as reduced metering costs, reduced wholesale costs, and emissions reductions.

#### A.4 The rule-making process to date

On 8 December 2022, the Commission published a notice advising of the initiation of the rule making process and a consultation paper in respect of the rule change request.<sup>238</sup> The Commission received 60 submissions to the consultation paper.

<sup>238</sup> This notice was published under section 95 of the NEL and section 251 of the NERL.

On 3 August 2023, the Commission released a directions paper that considered issues raised by stakeholders in response to the Consultation paper. We received 53 submissions to the directions paper.

On 29 February 2024, the Commission published a draft determination and draft rules, which outlined proposed arrangements and addressed issues raised in submissions to the directions paper. The Commission received 46 submissions to the draft determination and these have been considered in developing the final determination and final rules.

During the course of the rule change, we also held a number of forums and workshops with stakeholders to discuss technical and other issues related to the rule change.

### **B** Regulatory impact analysis

#### Table B.1: Regulatory Impact Analysis

Assessment crite- ria	Primary costs	Primary benefits	Stakeholders affected	Methodology
Outcomes for consumers	No economic costs	More choice for consumers of products and services for their CER devices by making it easier to access wholesale and ancillary markets and network services Access to lower- cost metering options by allowing consumers to use in-built measurement capability in technology Easier for providers to participate in dispatch with unscheduled price-responsive resources (through mechanism envisaged by Integrating price- responsive resources into the NEM rule change). Potential to reduce electricity costs for all consumers, through reduced council rates as	<ul> <li>CER device owners</li> <li>All electricity customers</li> </ul>	Energeia's quantitative analysis estimates the benefits of the rule changes for the customers participating, and what costs and benefits are shared with the broader customer base. Modelling conducted for the Integrating price- responsive resources into the NEM rule change estimates the benefits associated with this rule change for dispatch of price-responsive resources We considered stakeholder feedback on how customers could incur costs and benefits from the proposed rule changes

Assessment crite- ria	Primary costs	Primary benefits	Stakeholders affected	Methodology
		a result of more efficient street lighting and by enabling lower wholesale and FCAS costs and by networks offering cost- reflective pricing.		
Innovation and flexibility	No economic costs	A wider range of options for CER device management (i.e. different energy products and service offerings) Opportunities for innovation in technology with in-built metering	<ul> <li>CER device manufactur ers</li> <li>Retailers</li> <li>Third party aggregators</li> <li>CER device owners</li> </ul>	We engaged with stakeholders, including third-party aggregators, metering providers, retailers, and DNSPs on the opportunities for innovation that this rule change would create
Principles of market efficiency, particularly competition	No economic costs	Gains in allocative efficiency from exposing CER devices to better cost signals will drive dynamic efficiency gains over time Competition in the energy retail sector by making it easier for consumers to separate their flexible load from their inflexible load Networks could procure demand and export management services more	AII	Energeia's quantitative analysis estimates the long-run savings from greater CER device participation, in-built metering and smart street lighting to the energy system We considered stakeholder feedback on the opportunities for increased retail competition through disaggregating existing energy services and encouraging new energy services

Assessment crite- ria	Primary costs	Primary benefits	Stakeholders affected	Methodology
		efficiently from CER resources, helping to reduce the need for network augmentation		
Safety, security, and reliability	No economic costs	Networks would have better visibility of subloads (i.e. flexible CER), which they could use to plan for future infrastructure upgrades more accurately, such as network augmentation and the timing of replacement expenditure, which may help maintain reliability. Networks may also have a greater ability to enter into network services agreements with aggregated CER traders	All electricity consumers	We considered stakeholder feedback on whether the proposed rule changes would enable increased opportunities for CER to participate in network services and ancillary service markets
Implementation considerations	Costs for system changes for AEMO, retailers,DNS Ps, NMI service providers; Metering and NMI allocation costs;	Economic benefits covered in rows above and below	<ul> <li>AEMO</li> <li>Retailers</li> <li>Owners and operators of CER devices</li> <li>All customers</li> </ul>	Energeia's quantitative analysis investigated the implementation costs of system changes incurred by AEMO, DNSPs,retailers, and NMI service providers; individual costs for CER device owners; costs for councils upgrading street lighting. and parties installing kerbside EV

Assessment crite- ria	Primary costs	Primary benefits	Stakeholders affected	Methodology
	Capital costs for upgrading street lights			chargers
	No	Estimated reduction of		Energeia's quantitative analysis estimated the emissions changes resulting from the rule change by considering reduced overnight use by streetlights.
				Changes in emissions reductions from wholesale market activity from introducing flexible metering arrangements to small and large customers are likely to be marginal.
Emissions economic reductions cost	Estimated reduction of 267,000 tonnes of CO <sub>2</sub> e from smart street lighting, valued at \$16m	All	The rule change could contribute to emissions reductions as a result of the interaction with the IPRR rule change. Modelling undertaken for the IPRR rule change indicates that CER participating in dispatch will reduce emissions (by replacing higher- emissions generation) and that this rule change will make it easier for CER to participate in dispatch. [ <i>Draft Determination, IPRR</i> <i>rule change, p. 21, 52.</i> ]	

Source: AEMC

### **C** Interaction with the network exemption guideline

This appendix provides a detailed overview of how the:

- Network Exemption Guideline<sup>239</sup> would apply to the rule change arrangements without changes to the NER to address the overlap
- Final electricity rule amends the NER to clarify the interaction between the rule change arrangements and the Network Exemption Guideline to minimise regulatory duplication
- Final electricity rule will impact existing embedded networks and the Network Exemption Guideline.

In the draft determination, the Commission indicated that it would be preferable for new entrants looking to use SRAs to adopt the proposed secondary settlement arrangements, rather than establishing an embedded network.<sup>240</sup> In its submission to the draft determination, the AER expressed its support for the flexible trading framework as an alternative to the embedded network framework:

As mentioned in our previous submissions relating to this proposed rule change, the AER considers that using the embedded networks framework as a means to obtain separate connection/ settlement points could potentially limit consumer choice, inhibit fair competition within the energy market, and introduce further complexities in pricing structures and billing processes.<sup>241</sup>

The Commission indicated in the draft determination that it intended to work with the AER, in the course of preparing the final rule, to consider measures to clarify any interaction between the proposed new framework and the Network Exemption Guideline.

# C.1 How the Network Exemption Guideline would apply to the rule change arrangements without changes to the NER

The <u>Network Exemption Guideline</u> (Guideline) provides exemptions from the obligation to register with AEMO as a Network Service Provider.<sup>242</sup> It establishes a system of deemed and registrable classes with accompanying conditions. The AER may also grant individual exemptions. The AER uses conditions primarily to protect consumers who are supplied through an exempt network.

Without changes to the NER, the addition of an SSP may:

- bring supply arrangements involving CER within the scope of the Guideline
- move some customers from deemed to registrable exemption classes, increasing the regulatory burden
- result in metering installations being covered by both chapter 7 of the NER and the exemption framework
- not achieve the intended outcome that a customer of an SRA using an SSP is not required to obtain a network exemption.<sup>243</sup>

The following examples illustrate how the Network Exemption Guideline would have applied in different scenarios where an SSP may be used, if the rules were not changed.

<sup>239</sup> AER, Electricity Network Service Provider - Registration Exemption Guideline, Version 6, March 2018.

<sup>240</sup> Draft rule determination, s 3.2.4, p. 19.

<sup>241</sup> AER, submission to draft determination, p. 2.

<sup>242</sup> A person who owns, operates or controls a distribution system must be either registered as a Network Service Provider under the NER or exempted by the AER from the obligation to register.

<sup>243</sup> Assuming there is no other reason an exemption is required, such as supply to other users at the site.

#### **Small Resource Aggregators**

Currently, SRAs set up embedded networks within a customer's site by establishing a child connection point for the customer's CER (a small generating unit or small bidirectional unit) and classifying the connection point as a market connection point for which the SRA is the FRMP. Under the current rules, SRAs require a network exemption.<sup>244</sup>

The final rule allows the SRAs to establish an SSP for its customer's CER and classify the SSP as its market connection point. However, under the current rules, the customer, as the owner, operator or controller of the network within its site, would need an exemption under the Guideline due to the SRA having operation or control of the CER. Under the Guideline, this results in the customer providing distribution services to the SRA.

#### Metering installations including EV chargers

Under the final rules, an SSP is created by designating a metering installation within premises as an SSP. As a metering installation, even if owned by the customer, the SSP would fall under the Guideline because the FRMP may gain operational control and the Metering Coordinator will need to arrange services with respect to the metering installation.<sup>245</sup> Each owner (which may be the customer), operator or controller of the metering installation would be subject to the network exemptions regime.

#### Solar PV and battery in a small customer's premises participating in a VPP

The Guideline extends to off-market energy generation equipment owned, operated or controlled by a third-party.<sup>246</sup> Because the involvement of a third party triggers application of the Guideline, the designation of the metering installation for CER within a customer's site as an SSP would bring additional premises within the scope of the exemption.

#### CER providing network support or demand management services to the NEM

Where a customer's CER is owned, operated or controlled by a third party, either a deemed (NDO1) or registrable (NRO1) exemption class will apply, depending on whether the CER supplies network support or demand management services to the NEM. In many cases, the purpose of establishing a metering installation as an SSP will be for the FRMP using the customer's CER to provide services to the NEM. This would mean that the exemption category that applies to the customer by reason of its CER being controlled by a third party could move from deemed class NDO1 to registrable class NRO1, increasing the regulatory burden.

# C.2 How the final rule amends the NER to clarify interactions with the Network Exemption Guideline

The Commission identified two measures to address the interaction between the new framework and the Guideline:

• First, a network exemption should not be required due to a metering installation being designated as an SSP, as this would result in the application of conditions under the Guideline as well as chapter 7 of the NER. For regulatory consistency, the Commission has decided that

246 Class NDO1, under the Guideline.

<sup>244</sup> AER, Notice of Draft, <u>Network Exemption Guidelines (Version 7)</u>, October 2022, section 5, pages 11-12. The Notice of Draft refers to Small Generation Aggregators (SGAs). The term in the NER has since changed to Small Resource Aggregators (SRAs).

<sup>245</sup> Class ND4 provides a deemed exemption for metering installations (this includes metering panels and associated sundry equipment but not incoming sub-mains or outgoing service wiring).

this principle should apply to all metering installations that have a Metering Coordinator appointed.  $^{\rm 247}$ 

Second, for customers that establish an SSP to realise the benefits of its CER, a network
exemption should not be required by reason of contractual arrangements that give the
customer's FRMP or energy service provider operation or control of the customer's CER. For
regulatory consistency, the Commission has decided that this principle should not be limited
to single site customers with CER or an SSP.

To implement these changes, the Commission has made a final rule for the NER that defines two new terms, 'excluded metering installation' and 'single user network', and excludes these from the scope of the term 'distribution system'.

#### **Excluded metering installation**

A metering installation will only be an 'excluded metering installation' if it is not owned, operated or controlled by a Network Service Provider and a Metering Coordinator has been appointed for the metering installation under chapter 7. The first requirement has been included to avoid adverse impacts on registered DNSPs. The second requirement recognises that chapter 7 will apply to the metering installation and so the application of conditions under the guideline is not necessary. The definition extends to 'the metering panels and associated sundry equipment but not incoming sub-mains or outgoing service wiring', which reflects the wording of the current deemed exemption for metering installations (ND07) with the intention that the scope of the exclusion remains aligned with ongoing exemptions under the guideline for metering installations.

#### Single user network

A network within the limits of a site that a person (other than a Registered Participant) owns, operates or controls will only be a 'single user network' if any connection services<sup>248</sup> are provided only to that person, a Registered Participant or Metering Provider, a provider of energy management services or the owner of equipment (such as CER) that is owned operated or controlled by one of those people. The definition also allows for the use of plug in equipment, such as when performing cleaning or maintenance services for the site.<sup>249</sup>

In practice the 'single user network' definition is intended to allow arrangements to be put in place without the customer or its FRMP needing a network exemption, provided that the customer is the only person using the network for its electricity supply. Examples of these arrangements include:

- a large or small customer with CER that it operates itself to supply its own demand and then sell excess to its FRMP under a feed-in tariff
- a large or small customer giving operational control of its CER to a FRMP or energy management service provider, to enable the customer to optimise the value of its CER, for example through participation in a VPP
- a large customer engaging an SRA for its CER, where the SRA operates using an SSP

<sup>247</sup> Excluding those of registered Network Service Providers, to avoid unintended consequences.

<sup>248</sup> Connection services are defined in the rules. In general terms, these are services that allow electricity to flow to or from a network.

<sup>249</sup> This is to allow for some of the activities covered by deemed exemption class ND5 'All supply of energy via plug-in or rack mounted equipment in any premises. Includes NBN equipment in any premises with an input current rating not exceeding 3 amps AC.

A network will not qualify as a 'single user network' where:

- other activities take place on the site that involve a supply and are not covered by the definition. An exemption under the Guideline will be needed for these supplies.<sup>250</sup>
- it is connecting different sites, even if it is the same customer at all the sites.

## C.3 Impact on the Network Exemption Guideline, existing embedded networks, and other matters

#### Impact on the Network Exemption Guideline

The AER will need to review and update the Guideline to take into account the rule.<sup>251</sup>

The Guideline will also have a role where a network ceases to satisfy the single user network definition. For example, if a network is initially established with one user but other customers connect to the network over time, the owner, operator and controller of the network will need a network exemption (or to register under the NER).

#### Changes to 'distribution system' are not intended to impact on registered DNSPs

The changes to 'distribution system' in the final rule are not intended to have an impact on registered DNSPs under the framework established by the NEL and the NER.

The term 'distribution system' underpins the economic regulation of registered DNSPs under chapter 6 of the NER and related matters such as ring-fencing. The Commission has developed the two exclusions from the term 'distribution system' with the intention that they do not apply to any part of the distribution network of a registered DNSP and that networks and metering installations that are owned, operated or controlled by a registered DNSP will continue to be treated as part of its distribution system under the NER. Similarly, the exclusions are not intended to alter the scope of services provided by registered DNSPs that are 'distribution services' under the NER.

#### Existing embedded networks will remain embedded networks

Existing embedded networks will remain embedded networks even if an SSP is established on the premises. For example, at a large customer premises, there may be a second customer connected within the site boundaries, buying from its own retailer through a parent/child metering arrangement. The first or second customer (or both) could establish its own SSP for its controllable load and the embedded network would continue to operate.

Sites with CER that also use the site's network to supply electricity to other consumers will remain subject to the Guideline. For example, caravan parks will still require a network exemption, even if an SSP is used for a solar PV and battery arrangement within the site. The changes also do not extend to networks on sites owned, operated or controlled by a Registered Participant or to networks owned, operated or controlled by a registered Network Service Provider.

### Large customers and FRMPs using embedded networks can, but will not need to, switch to the new framework

The final rule does not require large customers currently using embedded networks to switch to the flexible trading framework. However, the Commission notes that for large customers who are

<sup>250</sup> Examples are ND3 which covers supplying metered or unmetered energy to occupants of holiday accommodation on a short-term basis, ND03 which covers a privately owned charging station located in a public area, hotel, shopping centre, university, etc and ND1, ND2, NR1 and NR2, all of which relate to the supply of metered or unmetered energy to residential or non-residential customers within the limits of a site.

<sup>251</sup> The Commission anticipates that classes such as ND07 will be retained, as it would still be needed for metering installations that do not have a Metering Coordinator.

not on-selling energy, the new flexible trading framework is intended to be a more transparent and efficient mechanism to engage multiple FRMPs and establish SSPs. Customers with SGAs using embedded networks may wish to convert to the new framework where there is no other reason to be regulated as an embedded network.

The Commission considers that it is preferable for new entrants looking to use SGAs to adopt the new flexible trading framework with secondary settlement arrangements, rather than establishing an embedded network.

#### Impact under jurisdictional legislation

Some jurisdictional legislation refers to the definition of 'distribution system' in the rules. Jurisdictions are best placed to assess the impact of the changes to the definition under jurisdictional arrangements and decide if any change to those frameworks is needed. They will have ample time to do so during the implementation period (longer than two years) before this aspect of the final rule takes effect.

### D Legal requirements to make the final rules

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

#### D.1 Final rule determination and final rules

In accordance with sections 102 of the NEL and 259 of the NERL, the Commission has made this final rule determination for more preferable final electricity and retail rules in relation to the rule change proposed by AEMO.

The Commission's reasons for making this final rule determination are set out in Chapter two.

The more preferable final rules are attached to and published with this final determination. Their key features are described in appendix E.

#### D.2 Power to make the final rules

The Commission is satisfied that the more preferable final rules fall within the subject matter about which the Commission may make rules.

The more preferable final electricity rule falls within section 34 and schedule 1 of the NEL as it relates to:

- section 34(1)(a)(iii) 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)(aa) facilitating and supporting the provision of services to retail customers
- section 27 of schedule 1 the metering of electricity to record the production or consumption of electricity
- section 28 of schedule 1 the registration of metering installations used to meter electricity.

The more preferable final retail rule falls within section 237(1)(a)(ii) of the NERL as it relates to the activities of persons involved in the sale and supply of energy to customers.

#### D.3 Commission's considerations

In assessing the rule change request the Commission considered:

- · its powers under the NEL and NERL to make the more preferable final rules
- the rule change request
- submissions received during consultation on the consultation paper, directions paper, and draft determination
- the ways in which the final rules would or are likely to contribute to the achievement of the NEO and NERO, including considering the targets in the <u>emissions target statement</u><sup>252</sup>
- the application of the more preferable final electricity rule to the Northern Territory, and
- the extent to which the more preferable final retail rule is compatible with the development and application of consumer protections for small customers.

<sup>252</sup> In accordance with NEL s. 32A(5) and NERL s. 224A(5).

There is no relevant Ministerial Council on Energy (MCE) statement of policy principles for this rule change request.<sup>253</sup>

The Commission may only make an electricity rule that has effect with respect to an adoptive jurisdiction if satisfied that the proposed rule is compatible with the proper performance of AEMO's declared network functions.<sup>254</sup> The more preferable final electricity rule is compatible with AEMO's declared network functions because the rule would not affect those functions.

#### 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.<sup>255</sup> Under those regulations, only certain parts of the NER have been adopted in the Northern Territory.

As the more preferable final electricity rule relates to parts of the NER that apply in the Northern Territory, the Commission is required to assess Northern Territory application issues, described below.

#### Test and determination 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:<sup>256</sup>

- 1. the national electricity system
- 2. one or more, or all, of the local electricity systems<sup>257</sup>
- 3. all of the electricity systems referred to above.

The Commission considers that the NEO test should include the Northern Territory electricity systems given that this rule will apply in the Northern Territory.

#### Test and determination 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.<sup>258</sup> 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.

<sup>253</sup> Under s. 33 of the NEL, 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.

<sup>254</sup> Section 91(8) of the NEL.

<sup>255</sup> These regulations under the NT Act are the National Electricity (Northern Territory) (National Uniform Legislation) (Modifications) Regulations 2016.

<sup>256</sup> Clause 14A of Schedule 1 to the NT Act, inserting section 88(2a) into the NEL as it applies in the Northern Territory.

<sup>257</sup> These are specified Northern Territory systems, listed in schedule 2 of the NT Act.

<sup>258</sup> Clause 14B of Schedule 1 to the NT Act, inserting section 88AA into the NEL as it applies in the Northern Territory.

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.<sup>259</sup>

The Commission's final determination is to make a uniform rule because the Commission does not consider it necessary for the rule to be different 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 energy ministers that new or existing provisions of the NER and NERR be classified as civil penalty provisions or conduct provisions.

The NEL and NERL set out a three-tier penalty structure for civil penalty provisions in the NEL and NERL and the NER and NERR.<sup>260</sup> A Decision Matrix and Concepts Table,<sup>261</sup> 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 and NERR should be classified as civil penalty provisions, and if so, under which tier.

The Commission does not recommend that any new provisions in the NER or NERR, introduced by the final rules, be classified as civil penalty provisions or conduct provisions.

Where the final rules amend provisions that are currently classified as civil penalty provisions, the Commission does not recommend to energy ministers any changes to the classification of those provisions. However, the final rule corrects non-standard numbering in an existing civil penalty provision, changing clause 7.8.2(ea) to 7.8.2(e1). As a result, the Commission has requested energy ministers to update the National Electricity (South Australia) Regulations, to change the reference to clause 7.8.2(ea) to 7.8.2(e1).

The more preferable final rules do not amend any provisions that are currently classified as conduct provisions under the National Electricity (South Australia) Regulations or the National Energy Retail Regulations.

<sup>259</sup> 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.

<sup>260</sup> Further information about civil penalties is available here

<sup>261</sup> The Decision Matrix and Concepts Table is available here

### **E** Summary of final electricity and retail rules

#### E.1 Overview

This Appendix outlines the amendments to the NER and the NERR made by the final rules and includes an overview of the changes made from draft to final rules.

The amendments described in this appendix relate to the NER and NERR and will take effect as follows:

- arrangements related to meter type 9: 31 May 2026
- arrangements related to meter types 8A and 8B, secondary settlement points, and changes to the NERR and retail contracts: 1 November 2026.

These amendments are made to the versions of the NER and NERR that will be in effect on the above dates, which includes changes made by rules already made but not yet in force as at the date of this final determination.

#### E.2 Changes from draft to final rules

#### E.2.1 Changes to electricity rule

For the final electricity rule, changes have been made to the draft rule to introduce the new NMI Service Provider role, allow for type 8A and 8B metering installations and update the metering accuracy tables in NER chapter 7, address the interaction with the AER'S Network Exemption Guideline and implement other policy changes and drafting corrections. The main changes to the draft rule are as follows:

- **NMI Service Provider:** Changes to chapter 7 implement the new NMI Service Provider role. The changes include:
  - the requirement for the FRMP to appoint the NMI Service Provider (clauses 7.2.6(d) and (e))
  - rules about NMI Service Provider qualifications and registration (new clause 7.4.2B and changes to Schedule 7.7)
  - adding a requirement for AEMO to make NMI Service Provider service level procedures (new clause 7.16.6C)
  - extending AEMO's obligation to publish accreditation guidelines to NMI Service Providers (consolidated in new clause 7.4.2C)
  - extending the rules about deregistration of service providers in clause 7.4.4
  - including a requirement that NMI management services only be carried out by a NMI Service Provider (clause 7.5A.3)
  - including an obligation for NMI Service Providers to issue NMIs (clause 7.8.2(e2))
  - providing for access to energy data (clause 7.15.5(c)(8))
  - requiring compliance with MSATS (clause 7.16.2) and providing for the NMI Service Provider role in the metrology procedure (clauses 7.16.3(c)(3) and 7.16.5(a)(1)(vi))
  - a new requirement for the NMI Service Provider to be recorded in the metering information in the metering register (clause S7.1.2(a)(4)).
- Defined terms relating to the NMI Service Provider role have been included in chapter 10. The
  definition of NMI Standing Data has been amended to include the identity of the NMI Service
  Provider for a secondary settlement point. To align with the arrangements under the NER
  applicable to Embedded Network Managers, clause 2.11.1A(a) has been amended to exclude

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NMI Service Providers from paying participant fees and changes have been made in chapter 8 in provisions relating to disputes and confidentiality.

- **Type 8A and 8B metering installations:** Changes to S7.4.3 and the related tables provide for both type 8A and type 8B metering installations. Item 6 in the list of notes following table S7.4.3.1 specifies that a type 8B metering installation may only be used at a secondary settlement point for a small customer. Changes to clauses 7.2.6(c)(3) and 7.8.1(e) reflect this principle. A change to clause 7.2.6(b)(3) reflects that a type 8A metering installations may be used at a site's connection point to the distribution system of its LNSP.
- Accuracy tables: The accuracy tables in clause S7.4.3 have been updated to reflect the changes proposed by AEMO to correct anomalies in the tables and to apply the correct tables to types 8A, 8B and 9 metering installations.
- **Data used by DNSPs for billing:** Clause 6.20.1(e) deals with the data that a DNSP must use for charges based on metered kW, kWh, kVA, or kVAh. The final rule updates the provision and simplifies the drafting.
- Interaction with the AER Network Exemption Guidelines: In chapter 10, the defined term 'distribution system' has been amended and two new terms 'excluded metering installation' and 'single user network' have been added to address the interaction between the new framework and the AER Network Exemption Guidelines. This is further explained in appendix C.
- **Transitional rules:** The transitional rules have been updated to reflect the final approach to implementation.

#### E.2.2 Changes to retail rule

For the final retail rule, changes to the draft rule have been made to reflect the Commission's decision that de-energisation of secondary settlement points is only permitted where deenergisation of the premises as a whole is permitted. In addition, to assist users of the NERR, provisions have been included to set out more clearly how the NERR apply where there is a secondary settlement arrangement.

The main changes to the draft rule are as follows:

- **Consumer protections**: A new rule 11A explains how consumer protections apply to customers with a secondary settlement arrangement.
- Secondary meters: A new rule 38A explains that a retailer cannot repair or replace a secondary meter that has been provided by the customer, and may move the customer from a secondary settlement arrangement tariff if the retailer cannot access the secondary meter for repairs, or, where the customer provided the meter, the customer does not arrange the repairs.
- **De-energisation:** A new rule 107A sets out the principles governing de-energisation of secondary settlement points under Part 6. The approach is also reflected in changes to the definition of 'interruption' in rule 3 and 'retailer planned interruption' in rule 59B.
- A new definition of 'premises connection point' has been included to refer to the point where premises are connected to the local distribution system.
- The transitional rules have been amended to list the AER guidelines that the Commission has identified are likely to need amendment.

#### E.3 NER key concepts

Under the final electricity rule, secondary settlement arrangements are introduced by allowing a Market Participant to establish a metering installation within the premises of an end user as a '**secondary settlement point**'. More than one secondary settlement point may be established at the same premises.

There are some restrictions. For example, a secondary settlement point cannot be established:

- · at premises that are the location of scheduled plant
- within a regulated SAPS, or
- in place of a child connection point in an embedded network.

A subset of secondary settlement points are 'small resource secondary settlement points'. These are the equivalent of small resource connection points, but used for small resources (e.g. for small batteries or small generating units) at secondary settlement points.

Amendments to Chapter 2 allow a secondary settlement point (including a small resource secondary settlement point) to be classified as a 'market connection point'. Prior to this rule change, the term 'market connection point' referred only to connection points for which a Market Participant is financially responsible. The final rule uses the same term for secondary settlement points that have been classified, but secondary settlement points are not intended to be a type of 'connection point' as that term is defined in NER chapter 10.

Classification of a market connection point results in the classifying Market Participant becoming the financially responsible Market Participant or FRMP for the point. The changes to chapter 2 made by the final rule require that for small customers, the same Market Participant must be the FRMP for the connection point and any secondary settlement points within the customer's premises.

Amendments to chapters 3 and 4A give effect to the secondary settlement arrangements in settlement and under the retailer reliability obligation. Amendments to chapters 6 and 6B provide for network charges to be billed to the retailer for the connection point and not the FRMP for the secondary settlement point. This will impact only large customers with secondary settlement points since for small customers, the same retailer will be the FRMP for both.

The final rule also provides for the two new metering installation types:

- **Type 8A and 8B** installations can be provided for or on behalf of the customer, with type 8B available to be used at secondary settlement points for small customers and (subject to volume limits and other technical requirements), type 8A at other points.
- **Type 9** metering installations are intended for streetlights and street furniture and the final rule allows these devices to be aggregated under one NMI.

#### E.4 Final NER amendments by chapter

#### E.4.1 Chapter 2 - Registered participants and registration

Chapter 2 specifies the obligation to register to buy and sell electricity through the NEM and the criteria for eligibility to register as an Integrated Resource Provider, including where participating as a Small Resource Aggregator or Customer, and the criteria to become a Metering Coordinator. Consequential changes to clauses 2.1A.3, 2.1B.2 and 2.1B.4 and rule 2.4A extend these provisions to accommodate secondary settlement points.

Several provisions in chapter 2 specify that the Market Participant must, in relation to a market connection point for which it is the FRMP, purchase all electricity supplied through the national

grid to the market connection point from the spot market. These provisions (clauses 2.2.4(d), 2.2.5A(c), 2.2.8(e) and 2.3.4(g)) are amended to clarify that where the market connection point is a connection point with a related secondary settlement point, this obligation applies only to the flow at the connection point for which the FRMP is financially responsible. This deals with the possibility that, at a large customer site, there may be a different FRMP for the connection point and secondary settlement point.

The provision under which an Integrated Resource Provider may classify a small resource connection point as one of its market connection points (as a Small Resource Aggregator) are extended to allow for the classification of small resource secondary settlement points within the premises of a large customer (clause 2.2.8, with a consequential change at new clause 2.3.4(a1)). The change does not extend to the premises of a small customer because a small customer would have the same FRMP for both the connection point and small resource secondary settlement point, in which case the Integrated Resource Provider would need to be a retailer and not a Small Resource Aggregator.

The final rule extends the provisions under which connection points can be classified as market connection points, to allow for secondary settlement arrangements. The changes include a new provision to deal with a large customer becoming reclassified as a small customer (clause 2.3.2); premises with a secondary settlement point no longer being eligible to be classified as a secondary settlement point due to a scheduled resource being established at the premises or other criteria in clause 7.2.6 no longer being satisfied (clause 2.3.3); and a new paragraph allowing a Customer or Integrated Resource Provider (in its capacity as a Market Customer) to classify a secondary settlement point as one of its market connection points (new clause 2.3.4(b1)). This is subject to the principles that a small customer must have the same FRMP at both its connection points and its secondary settlement point if there is a scheduled resource at the premises (new clauses 2.3.4(b2) and (b3)). The final rule also makes consequential changes to clause 2.3.4.

The final rule makes a consequential change to the provision defining a 'qualifying load' for the purposes of the wholesale demand response mechanism to confirm that premises with a secondary settlement point classified as a market connection point are not eligible to provide wholesale demand response (new clause 2.3.6(m)(1)(viii)).

Where the metering installation for plant has been established as a secondary settlement point and classified as a market connection point, the plant is eligible to provide market ancillary services if it satisfies the eligibility criteria in the rules and AEMO's procedures. The final rule amends clause 2.3D.1 to reflect this principle.

Rule 2.10 deals with ceasing to be a registered participant. Where relevant, the final rule extends the provisions to refer to secondary settlement points (clauses 2.10.1(c) and (c1)). However, the final rule does not extend the provision under which AEMO can reject a notice from a Market Customer that it wishes to terminate its classification of a connection point as one of its market connection points (clause 2.10.1(d)). Where a FRMP for a secondary settlement point ceases to classify that point (that is, where the NMI for the point becomes inactive), subtractive metering arrangements will no longer apply and so the energy flows through the point will continue to be settled in the market by the FRMP for the connection point for the premises. In practice, this will only affect large customer premises, since the FRMP must be the same for the connection point and any secondary settlement point for small customer premises.

The final rule amends clause 2.11.1A so that NMI Service Providers are not required to pay participant fees, consistent with the approach to Embedded Network Managers.

The final rule makes a consequential change to the interpretation provision in rule 2.12 to recognise small resource secondary settlement points classified under clause 2.2.8.

Some minor drafting changes are made to chapter 2 for consistency, such as changes to clause 2.3C.2.

#### E.4.2 Chapter 3 - Market rules

The final rule amends chapter 3 so that the term 'market connection point' is used consistently in the settlement provisions. The final changes are in clauses 3.15.4, 3.15.5, 3.15.6, 3.15.6A, 3.15.8(g), 3.15.8A(b), 3.15.9A(k) and 3.15.10(b). A consequential change has also been made to the clause confirming financial responsibility for market connection points, to extend it to financial responsibility for secondary settlement points classified as market connection points (clause 3.15.3).

A secondary settlement point will be assigned to the same transmission connection point as the connection point for the premises and similarly, the distribution loss factor (DLF) for a secondary settlement point will be the same as the DLF for the connection point for the premises.

Although the final determination does not allow for secondary settlement points to be established within a regulated SAPS, the provision dealing with settlement in a regulated SAPS are amended to replace the term 'connection point' with 'market connection point' to promote consistent drafting (rule 3.21).

The provision dealing with NMI standing data arrangements in Victoria (clause 3.13.12 – Victoria does not apply the NERL) are amended to recognise that NMI standing data will be required for secondary settlement points since they will be allocated child NMIs to enable subtractive metering.

#### E.4.3 Chapter 4 - Power system security

In chapter 4, the final rule amends the provision under which Market Customers having expected peak demands in excess of 10 MW must provide automatic interruptible load (clause 4.3.5). The amendment provides for the 10 MW threshold to be calculated by reference to load at market connection points, so that, in the case of a large customer with two FRMPs, any load at a secondary settlement point is attributed to the FRMP for that point rather than the FRMP for the connection point, due to the subtractive metering arrangements.

#### E.4.4 Chapter 4A - Retailer reliability obligation

Under Parts D and F of this chapter respectively, obligations and compliance for the retailer reliability obligation are determined with reference to consumption at connection points for which an entity is financially responsible. The final rule amends the provisions to refer to 'market connection points' in place of 'connection point', so that the provisions continue to operate as intended where a Market Customer or Integrated Resource Provider is financially responsible for a secondary settlement point.

The final rule also amends clause 4A.E.7 to refer to market connection points in the provisions dealing with adjustments to net contract positions.

The final rule amends the provisions calculating the threshold for new entrants in clause 4A.D.3(c) to include a reference to small resource secondary settlement points.

A minor drafting change in clause 4A.D.11 standardises the paragraph numbering.

#### E.4.5 Chapter 5A

In Chapter 5A, a consequential change is made to clause 5A.A.4 to reflect that the market connection point for a small generating units or small bidirectional units may not be the connection point to the local network.

#### E.4.6 Chapters 6 and 6B - Economic regulation of distribution services; retail markets

Clauses 6.20.1(b) and (c1) would be amended and (in chapter 6B) a new clause 6B.A2.1A would be inserted to confirm that network charges should be billed to the primary retailer.

The final rule amends clause 6.20.1(e) to refer to the new metering installation types 8A and 9 being introduced in chapter 7. The clause was also out of date and no longer aligned with the arrangements for obtaining metering data for calculating bills under chapter 7, and so the final rule updates and replaces the whole clause.

#### E.4.7 Chapter 7 - Metering

#### Overview

Amendments to Chapter 7 allow a Market Participant to establish one or more secondary settlement points within premises unless the connection point for the premises is for a scheduled resource (including a wholesale demand response unit) or is a connection point in a regulated SAPS. The connection point must also have a type 1, 2, 3, 4, 8A or 9 metering installation.

Amendments to Chapter 7 also introduce metering installation types 8A, 8B and 9 and the new role of NMI Service Provider.

Minor drafting changes are made throughout the chapter to use consistent drafting when referring to child connection points. The aim is to be clear that child connection points relate to embedded networks and so limit the potential for confusion given that child NMIs, which prior to this rule were only used for child connection points, will be issued for secondary settlement points. Secondary settlement points are not a category of child connection point.

The final rule also updates several technical tables in the schedules to chapter 7.

Table E.1: Lis	t of changes to chapter 7
Provision	Amendment
Clause 7.1.2	To apply the metering obligations in chapter 7 to secondary settlement points, clause 7.1.2 is amended to give the term 'connection point' an extended meaning in chapter 7 that includes secondary settlement points.
New clause 7.2.6	New clause 7.2.6 allows a Market Participant to establish a metering installation situated within the premises of an end user as a secondary settlement point, if the eligibility criteria are met. For the final rule, the new provisions clarify that this includes a metering installation situated within a single user network or within premises in an embedded network.
	The criteria are primarily that (1) the connection point for the premises must not be a connection point for a scheduled resource or a connection point in a regulated SAPS and (2) the metering installation must be NER compliant, must not be for a child connection point or other point of supply to another end user, and (except for small customers) must not be a type 8B metering installation. Type 8B metering installations can only be used at the secondary settlement point of a small customer, due to the lower accuracy requirements.
	New clause 7.2.6(d) requires the FRMP for the secondary settlement point to appoint a NMI Service Provider. New clause 7.2.6(e) allows AEMO to refuse to let the SSP to participate in the market if that is not done.
Clauses 7.3.2(a) and (b)	Clauses 7.3.2(a) and (b) are amended to recognise that a small customer, or someone on its behalf, may install the type 8A or 8B metering installation at a secondary settlement point, such as an EV charger. In that case, the Metering Coordinator would only be required to commission and maintain the meter, but not provide or install it.
Clauses 7.4.2A, 7.4.2B and 7.4.2C	Clause 7.4.2A is amended to delete paragraph (c) (since it duplicates requirements elsewhere in chapter 7), to move paragraph (d) to new clause 7.4.2C and to update a cross-reference.
	New clause 7.4.2B provides for the qualifications and registration of NMI Service Providers.
	New clause 7.4.2C moves the requirement for AEMO to create a qualification process for Embedded Network Managers from schedule S 7.7, extends it to NMI Service Providers and allows a single process for both roles. The clause now also contains the requirement for guidelines that was previously in clause 7.4.2A, which has also been extended for NMI Service Providers.
Clause 7.4.4	The clause dealing with deregistration of Metering Providers, Metering Data Providers and Embedded Network Managers is extended to NMI Service Providers with drafting changes to streamline the clause.
Rule 7.5A	Rule 7.5A, relating to the role and responsibility of Embedded Network Managers, is extended to cover NMI Service Providers. A redundant 'Note' is removed. A new clause 7.5A.3 provides that NMI management services must be carried out only by a NMI Service Provider, to support the operation of the provisions relating to accreditation.
Clause 7.6.2(a)	Clause 7.6.2(a) specifies who may appoint a Metering Coordinator. Subparagraph (3) allows a large customer to appoint the Metering Coordinator

Provision	Amendment
	for the connection point for its premises. This is extended to allow a large customer to appoint the Metering Coordinator for secondary settlement points within its premises.
Clause 7.8.1	Clause 7.8.1 specifies metering installation requirements including (at paragraph (c)) that installation and maintenance of a metering installation must be carried out only by a Metering Provider. This is made subject to a new paragraph (d) that allows a type 8A or 8B metering installation for a secondary settlement point to be installed by any person qualified under applicable law to do so. A new paragraph (e) specifies that the Metering Coordinator at a connection point must ensure that there is not a type 8B metering installation at the connection point unless it is a secondary settlement point within the premises of a small customer.
Clause 7.8.2	Clause 7.8.2 deals with metering installation components. Paragraph (a)(1) is amended to clarify that the information display can either be part of the metering installation or can be made available to the customer by some other means, subject to there being no delay. Paragraphs (a)(3) and (a)(9), relating to electronic data transfer facilities and facilities for storing interval energy data respectively, are extended to type 8A, 8B and 9 meters.
	The non-standard numbering format of clauses 7.8.2(ea) to (ec) is corrected and clauses are renumbered to allow for the insertion of new clause (e2).
Clause 7.8.2(ea)	New clause 7.8.2(e2) provides for the NMI Service Provider for a secondary settlement point to apply to AEMO for a NMI and provide the NMI to the FRMP, Metering Coordinator and if applicable, the Embedded Network Manager, and register the NMI with AEMO.
	AEMO's obligation under paragraph (ec) (now (e4)) to issue NMIs for child connection points is amended so it extends to secondary settlement points.
Clause 7.8.3	Clause 7.8.3 requires new or replacement small customer metering installations to be type 4. Paragraph (a) is amended to allow a type 4 or type 8B meter to be used for a secondary settlement point within the premises of a small customer. Consequential changes are made to the cross references in clause 7.8.4.
Clause 7.8.3(b)	Clause 7.8.3(b) requires AEMO to make procedures relating to the minimum services specification. The clause is amended to include a reference to clause S7.5.1 and refer the new provision at clause S7.5.2 under which AEMO must make procedures to specify the minimum services specification for type 8A, 8B and 9 metering installations.
Clause 7.8.10	Clause 7.8.10 deals with metering installation malfunctions. A new paragraph (e) is added for type 8A and 8B metering installations provided by a customer for a secondary settlement point. The FRMP is required to notify the customer of the malfunction but is not required to repair the metering installation itself. If the customer does not undertake the repairs within the required time, the secondary settlement point would cease to operate (that is, would be inactive) until the repairs are undertaken. During that time, all flows at the secondary settlement point will be settled through the FRMP for the connection point.
Clause 7.9.6	Clause 7.9.6, which requires AEMO to publish a registration process to facilitate

Provision	Amendment
	the application of the chapter, is extended to refer to a process for establishing secondary settlement points.
Clause 7.10.1(a)(2)	The obligations of MDPs under clause 7.10.1(a)(2) relating to the validation and substitution of metering data are extended to refer to type 8A, 8B and 9 metering installations.
Clause 7.10.5(a)(1)	Clause 7.10.5(a)(1), relating to periodic metering data, is extended to include type 8A, 8B and 9 metering installations.
Clause 7.15.3(e)	Clause 7.15.3(e), under which passwords for security controls for energy data are provided to AEMO, is extended to type 8A, 8B and 9 metering installations.
Clause 7.15.4(b)	The final rule adds a new paragraph (1A) to clause 7.15.4(b), to extend the list of parties that have access to services provided by a small customer metering installation and metering data to those specified in the minimum services specification for type 8B metering installations to be made by AEMO under clause S7.5.2.
New clause 7.15.5(c)(7)	New clause 7.15.5(c)(7) gives an LNSP access to the metering data from secondary settlement points within premises connected to its network.
New clause 7.15.5(c)(8)	New clause 7.15.5(c)(8) gives a NMI Service Provider access to the NMI Standing Data for secondary settlement points it is appointed to.
Clause 7.16.2	Clauses 7.16.2(c) and (d) are amended to require NMI Service Providers to comply with the MSATS Procedures. Drafting changes are made to streamline the clause.
	Clause 7.16.3(c)(3) is amended to require the metrology procedure to include the obligations of NMI Service Providers.
Clause 7.16.3(c)	New clause 7.16.3(c)(9) requires the metrology procedure to include the conditions for classification of a metering installation with a central management system.
New clause 7.16.3(c)(6)(v)	New clause 7.16.3(c)(6)(v) requires the metrology procedure to include procedures for the method to be used by a Metering Data Provider to determine the metering data for a secondary settlement point or a child connection point where its connection point or parent connection point has been de-energised or disconnected or the network serving its connection point or parent connection point is experiencing an outage.
Clause 7.16.5(a)(1)	Clauses 7.16.5(a)(1)(iv) and (a)(1)(v) are extended so that the metrology procedure may clarify the operation of the Rules in relation to metrology for a market connection point that is a secondary settlement point and for the accreditation of NMI Service Providers.
Clause 7.16.5(a)(2)	Clauses 7.16.5(a)(2)(iii) and (iv) are extended so that the metrology procedure may specify in detail NMI Service Provider capabilities and the technical standards for metering of a market connection point that is a secondary settlement point.
Clause 7.16.6	New subparagraph (5A) in clause 7.16.6(c) requires the service level procedures to include the requirements for the assignment of a secondary settlement point within premises to the connection point to the national grid. This is to facilitate the use of subtractive metering arrangements.

Provision	Amendment
Clause 7.16.6A(e)	Clause 7.16.6A(e) is deleted because it duplicates clause 7.16.6A(c)(7).
New clause 7.16.6C	The final rule inserts new clause 7.16.6C, which sets out the requirements for the NMI Service Provider service level procedures to be made by AEMO.
Clause S7.1.2	Clause S7.1.2 is amended to provide for the metering register to include information about the NMI Service Provider for secondary settlement points.
Clause S7.2.1(d)	Clause S7.2.1(d) is amended to reflect that customers may provide type 8A or 8B metering installations.
Clause S7.2.2(a) and table S7.2.2.2	Clause S7.2.2(a) and table S7.2.2.2, which deal with categories of registration, are extended to type 8A, 8B and 9 metering installations and to reflect that customers may provide type 8A and 8B metering installations, in which case the Metering Provider will be commissioning and maintaining the installation, but not providing or installing it.
Clause S7.2.3	Clause S7.2.3, which describes the capabilities of Metering Providers for, among others, type 4 metering installations, is extended to type 8A, 8B and 9 metering installations and aligned with the capabilities required for type 4, in particular, at paragraph (f) relating to AS 9000.
Clause S7.2.5	Clause S7.2.5 is extended to categories of Metering Providers with accreditation for type 8B metering installations so that all Metering Providers for small customer metering installations are subject to the security control management plan and related requirements in paragraph (b).
Clause S7.2.6	Clause S7.2.6 relating to the capabilities of Accredited Service Providers is extended to measuring installation types 8A, 8B and 9.
Table S7.3.2.1	Table S7.3.2.1 sets out the categories of registration for accreditation by metering installation type. The table is extended to type 8A, 8B and 9 metering installations and the new registration categories 8M and 9M.
Clause S7.4.1	Clause S7.4.1 is amended to incorporate provisions proposed in the rule change request. These deal with the use of extended range current transformers and the use of a generic design to demonstrate accuracy for type 4, 5 and 6 metering installations.
	The text that was presented in Item 6 and Notes to the bottom of the tables in S7.4.3 is repositioned as a lead-in to the clause to aid clarity. Table S7.4.3.1 is also amended to remove the column 'maximum allowable overall error' and the related item in the Notes because the same material is set out in other tables in S7.4.3.
Clause S7.4.3	New paragraph (e) in clause S7.4.3 clarifies that where subtractive metering arrangements are used (that is, parent and child NMIs used for secondary settlement point arrangements or embedded networks with child connection points) the annual energy throughput is the total throughput for the metering installation not the net throughput after subtraction of the child NMI metering data.
	The final rule also inserts new paragraph (f) to specify that where a metering installation is operating at more than 100% of rated load, the overall error must be the same as the error at 100% of rated load.
Provision	Amendment
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Table S7.4.3.1	Table S7.4.3.1 deals with the volume limits by metering installation types, the minimum acceptable class or standard of components and allowable clock errors. The table is supplemented by a set of notes set out as numbered 'items'. New rows are added to the table to specify the requirements relating to type 8 (including 8A and 8B) and 9 metering installations. Consequential changes are made to the notes in items 1 and 6.
	Item 2a is amended to allow AEMO to relax the clock error for types 8A, 8B and 9 metering installations in the metrology procedure, as it can currently do for types 4 and 4A.
	A new item 6 specifies that a type 8B metering installation may only be used at a secondary settlement point for a small customer.
	A new item 7 allows the maximum allowable error of a type 8A, 8B or 9 metering installation to be relaxed in the metrology procedure. Item 8, relating to type 9 metering installations, permits these to include a central management system.
Tables S7.4.3.2 to S7.4.3.6 and new table S7.4.3.7	Tables S7.4.3.2 to S7.4.3.6 specify detailed accuracy requirements by metering installation type. These are corrected as proposed by AEMO. In addition, table S7.4.3.4 is extended to type 9 metering installations. A new table S7.4.3.7 is inserted to specify the overall accuracy requirements for type 8B metering installations.
Table S7.4.4	Table S7.4.4 is amended to specify that check metering is not required for type 8A, 8B or 9 metering installations.
Schedule S7.5	The schedule is amended so that the minimum services specification in table S7.5.1.1 does not apply to type 8A, 8B or 9 metering installations. Instead, a new clause S7.5.2 is inserted to allow AEMO to establish, maintain and publish procedures that set out each service required to be provided by type 8A, 8B and 9 metering installations, subject to the considerations in the clause. The new clause also specifies when a type 8A, 8B or type 9 metering installation meets the minimum services specification, consistent with clause S7.5.1.
Table S7.5.1.1	Table S7.5.1.1 sets out services and access parties for the services and metering data (references in clause 7.15.4). The table is amended to add the LNSP as an access party for the remote on-demand meter read service at item (c) and the remote scheduled meter read service at item (d), in relation to a secondary settlement point located within premises connected to its network.
	Schedule 7.6 deals with inspection and testing requirements.
Tables S7.6.1.2 and S7.6.1.3	Tables S7.6.1.2 and S7.6.1.3 are amended to clarify and correct the tables as requested by AEMO in the rule change request and to extend the tables to the new metering installation types.
Schedule 7.7	Schedule 7.7 sets out the capabilities of Embedded Network Managers. The final rule extends the schedule to NMI Service Providers and moves the obligations for AEMO to establish a qualification process to new clause 7.4.2C.

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### E.4.8 Chapter 8 - Administrative functions

The final rule amends clauses 8.2.1(h)(10) and (11) to clarify that the rules dispute framework in rule 8.2 does not apply to a decision by AEMO under clause 7.2.1(b) or 7.2.6(e) to refuse to permit a Market Participant to participate in the market in respect of a secondary settlement point, or a decision under clause 7.4.4(d) to deregister or suspend a NMI Service Provider. The drafting in clause 8.2.1(h)(11) has been streamlined.

The final rule also amends clauses 8.2A.2(b) (relating to B2B Determination Dispute) and rule 8.6.1 (relating to confidentiality) so that NMI Service Providers are treated the same way under these provisions as Embedded Network Service Managers.

### E.4.9 Chapter 10 - Glossary

Definition	Amendment
central management system	A new defined term 'central management system' is included to allow for metering installations that comprise many devices over an area that are then aggregated into a single installation (ie type 9).
connection point	The term 'connection point' is amended by adding a note referring to the extended meaning it has in chapter 7.
distribution system	The term is amended to exclude 'excluded metering installations' and 'single user networks'.
Embedded Network Manager	A minor drafting change is made to reflect that schedule 7.7 has been extended to NMI Service Providers.
excluded metering installation	The new term 'excluded metering installation' is used in 'distribution system'. A metering installation will only be an 'excluded metering installation' if it is not owned, operated or controlled by a Network Service Provider and a Metering Coordinator has been appointed for the metering installation under chapter 7. The definition extends to 'the metering panels and associated sundry equipment but not incoming sub-mains or outgoing service wiring', which reflects the wording of the current deemed exemption for metering installations (ND07) in the AER's Network Exemption Guideline. See appendix C for more detail.
interval energy data	The term 'interval energy data' is amended to refer to type 8A, 8B or 9 metering installations which are assumed to be capable of providing data in the same manner as types 1, 2 and 3 metering installations.
market connection point	The term 'market connection point' is amended to include secondary settlement points classified as such under chapter 2.
metering installation	The term 'metering installation' is amended to include reference to central management systems and associated components. The definition has also been restructured so that it is easier to read. The second 'note' under the definition is deleted; it is out of date because the term 'metering installation' now encompass revenue metering points and check metering points.

### Table E.2:List of changes to chapter 10

Definition	Amendment
new connection	A drafting change to the term 'new connection' includes reference to its use in chapter 7.
NMI management services	A new definition 'NMI management services' is included to refer to the services provided by a NMI Service Provider.
NMI Service Provider	A new definition 'NMI Service Provider' is included to refer to a person accredited and registered as such.
NMI Service Provider service level procedures	A new definition 'NMI Service Provider service level procedures' is included to refer to the procedures established by AEMO in accordance with clause 7.16.6C.
NMI Standing Data	Paragraph (c) of the definition is amended to include a NMI Standing Data for a secondary settlement point, the identity of the NMI Service Provider.
Nivir Standing Data	Other drafting changes to the clause extend the term to secondary settlement points and aligns with other drafting changes for child connection points.
Registered Participant	A consequential change to paragraph (c) of 'Registered Participant' reflects the change to clause 2.11.1A.
SAPS energy	Although SSPs cannot be established at SAPS, in this definition, 'connection point' is changed to 'market connection point' for consistency with the new drafting approach in chapter 3.
SAPS Participant	Although SSPs cannot be established at SAPS, in this definition, 'connection point' is changed to 'market connection point' for consistency with the new drafting approach in chapter 3.
secondary settlement point	A new definition 'secondary settlement point' is included.
single user network	A new definition 'single user network' is included and used in 'distribution system'. See appendix C for more detail.
Small Resource Aggregator	The definition of 'Small Resource Aggregator' is amended to reflect that a small resource secondary settlement point for a large customer can be classified as a market connection point under clause 2.8.8.
small resource secondary settlement point	A new defined term 'small resource secondary settlement point' is included to refer to secondary settlement points for small generating units or small bidirectional units, where the only supply to the point is for use by the small bidirectional unit or is auxiliary load. This is intended to reflect the definition of 'small resource connection point'.
spot price	The term 'spot price' is amended to remove an out of date reference to the price at a connection point, since clause 3.9.2 only refers to determination of the spot price at a regional reference node.
SRA customer	The term 'SRA customer' is amended to include a reference to small resource secondary settlement points, to reflect the new framework.

In addition to the changes mentioned above, the following defined terms are amended by including a reference to secondary settlement points: active energy, Customer, Incoming Retailer,

### Definition

#### Amendment

Jurisdictional NMI Standing Data suppliers, Market Customer, Market Settlement and Transfer Solution Procedures (MSATS), Non-Registered Customer and small customer metering installation.

# E.5 NERR key concepts

The final retail rule clarifies how the rules apply where a secondary settlement point has been established at a customer's premises. The changes reflect that small customers will have the same FRMP for both the connection point and the secondary settlement point, but a large customer may have different FRMPs for each point.

The final rule introduces new terms in the NERR:

- The new term 'secondary settlement arrangement' refers to premises where a second settlement point has been classified as a market connection point.
- The new term 'primary retailer' refers to the retailer that is financially responsible for the connection point – except in the case of large electricity customers, this will be the same as the retailer for the premises.
- The new term 'secondary meter' refers to the metering installation at a secondary settlement point.
- The term 'secondary settlement point' has the same meaning as in the NER.
- The term 'premises connection point' refers to the connection point between a customer's premises and the distribution system of a regulated distribution network service provider.

The changes reflect that the metering installation for a secondary settlement point may have been provided by or on behalf of the customer (such as an EV charger) and retailers would not be entitled to replace those metering installations.

The primary retailer will have rights of access to the primary meter (as at present) and to metering data from any secondary meter if that will be used for the customer's tariff. The retailer does not have a right to de-energise for denying access to a secondary meter or its data. Instead, the retailer may move the customer to a tariff that does not require the metering data from the secondary meter.

The changes clarify how the rights and obligations of retailers apply with respect to secondary settlement points and the meters and metering data from secondary settlement points. The final rule provides for these to be the same as retailers' rights and obligations with respect to the connection point for premises except as otherwise provided in the rules.

The final amendments do not allow de-energisation or disconnection of secondary settlement points at premises unless de-energisation or disconnection of the premises is also permitted under the rules. In recognition that it may be technically possible to disconnect from the grid but allow CER to continue to operate, the final rule allows this to occur.

The changes clarify how the rights and obligations of distributors apply with respect to secondary settlement points. With some exceptions, the distributor is only required to give notice to the primary retailer or accept requests for reclassification or de-energisation from the primary retailer.

The standard retail contract is amended to allow for the possibility that a retailer's standard tariffs may include one or more that recognises CER benefits and to reflect the arrangements for secondary meters.

# E.5.1 Final changes to the NERR

Table E.3: Out	line of NERR changes in final retail rule
Rule 3	<b>Definitions:</b> New terms 'premises connection point', 'primary retailer', 'secondary meter', 'secondary settlement point' and 'secondary settlement arrangement' are included in rule 3.
	The final rule also amends 'small generator' to clarify that it includes a battery, with a corresponding change to the definition of 'small generator' in the 'Model terms and conditions for deemed standard connection contracts' in schedule 2.
	The final rule amends 'interruption' to extend it to secondary settlement points and 'meter' to reflect that some meters will be within premises, not just at the premises connection point.
Rules 5 to 11	<b>Classification:</b> Rules 5 to 10 are amended to reflect the principle that a customer's primary retailer deals with classification and reclassification.
	New rule 5(6)(b) clarifies that where premises are aggregated, there can be a different FRMP for a secondary settlement point at any of those premises.
	A consequential change is made to rule 11(4)(b) for consistency and to clarify that for classification purpose, a distributor can use estimates from each retailer (in respect of its own meter), not just one of them.
	Application of consumer protections:
New rule 11A	New rule 11A(1)(a) explains that a secondary settlement arrangement with a small customer is taken to form part of the arrangement for supply to the premises by the financially responsible retailer for the premises. For large customers, this will not always be the case because large customers may have a different FRMP for its secondary settlement points.
	New rule 11A(1)(b) sets out the principle the consumer protections under the Rules with respect to the supply of electricity to a small customer's premises extend to any secondary settlement arrangement with the customer, subject to exceptions in the Rules. Two examples are included in subrule (2). For examples of exceptions to the general principle, refer to new rule 38A and rule 107A.
	Subrule (3) confirms that a standard retail offer may provide for secondary settlement arrangements and subrule (4)
Rules 29 and 37	<b>Bills</b> : Rules 29(5) and (5A) and rule 37(2) are amended to reflect that more than one meter may be used to calculate a bill.
	Rule 35(1) is amended to reflect that the bill may relate to the premises and SSPs within the premises.

New rule 38A	<b>Replacement or repair of secondary meter:</b> The final rule inserts new rule 38A, which specifies that a retailer must not repair or replace a secondary meter provided for or on behalf of a small customer except with the consent of the customer. The rule allows the retailer to move the small customer to a tariff that is not a secondary settlement arrangement if the secondary meter malfunctions and the retailer cannot access the premises for repairs or, where the customer provided the meter, the customer fails to arrange for repairs.
Dulas EOD and	Retailer planned interruptions and de-energisation requests:
SPC	Rules 59B and 59C are amended so that the 'retailer planned interruptions' obligations extend to all secondary settlement points within the premises.
Rule 64	<b>Energy marketing:</b> Rule 64(1)(a2) is amended so that the information provided by a retailer to a prospective customer needs to include information about terms and conditions associated with a proposed secondary settlement arrangement, including prices, charges and benefits and any requirements for operational control by the retailer or the distributor of equipment within the customer's premises.
	Retail support arrangements / shared customers:
Rule 79	Rule 79(2) is amended to clarify that only a customer's primary retailer can apply for customer connection services.
Rule 82	Rule 84(2) is amended to clarify that only the primary retailer has the obligation to cooperate with the distributor in relation to GSL payments.
Rule 93	A note is added under rule 93(1) to refer to rule 11A(4), which states that a customer with a secondary retailer will be a 'shared customer' of that retailer and the distributor. This flows from the defined term in the NERL and is intended to ensure that except where otherwise specified, the obligations in Part 5 apply (separately) to ensure cooperation between the distributor and the primary retailer and the distributor and the secondary retailer.
Rules 99 and	Rule 99 is amended so that a distributor is only required to notify the primary retailer of distributor planned interruptions or unplanned interruptions.
99A	Rule 99A is amended so that only the primary retailer needs to tell the distributor of retailer planned interruptions.
Rule 100	Rule 100 is amended so that the distributor only has to notify the customer's primary retailer of unplanned interruptions.
	The obligation in rule 100(3) for retailers to refer a customer enquiry to the distributor is amended so that it applies to both retailers.
Rule 101	Rule 101 is amended so that if a shared customer (a large customer) makes an enquiry or complaint to the distributor about an issue relating to the sale of energy and there is a secondary settlement arrangement, the distributor must tell both retailers. Only the retailer the subject of the complaint or enquiry is required to resolve it.
Rule 102	Rule 102(2) is amended so that only a request from a primary retailer requires a distributor to provide information about a shared customer's energy consumption.
Rule 104	Rule 104 is amended to give effect to the principle that only the primary retailer

	has to give or be given notice of de-energisation to or by the distributor.
Rule 106A	Rule 106A is amended to give effect to the principle that only the primary retailer has to give or be given notice of re-energisation and to reflect (in subrule (6)) that only a primary retailer can request de-energisation of premises.
	However, rule 106A(3) has not been amended, so that both the primary and secondary retailer are subject to the requirement that a retailer must not arrange re-energisation of a customer's electricity supply by a person other than the distributor if the premises were de-energised by the distributor.
Part 6 (rules 107 to 122)	<b>De-energisation of premises:</b> Part 6 (rules 107 to 122) deals with de- energisation of premises. The Part applies only to small customers, with the exception of rules 119 and 120(1)(a), (2) and (3).
	The final rule inserts a new rule 107A, dealing with de-energisation and re- energisation where there is a secondary settlement arrangement. As provided for in rule 107A(1), a retailer must not arrange de-energisation of a customer's secondary settlement point separately from the premises. De-energisation of a customer's premises is governed by other rules including the prohibition in rule 107(2). If the retailer is required to re-energise premises it must at the same time re-energise the secondary settlement point. The rule allows a secondary settlement point to remain energised even if the premises are de-energised.
	Rule 113(1) is amended so that there is no right to de-energise for denying access to a secondary meter. Rule 113(2) is amended so that there is no right to de-energise the premises if a customer does not provide the retailer or its representatives safe access to the customer's premises in accordance with any requirement under the energy laws or otherwise for the purpose of testing etc a secondary meter or replacing etc a secondary meter. A note has been added to refer to new rule 38A.
	<b>Prepayment meter systems:</b> The prepayment meter system rules are extended to secondary settlement points.
Rules 129, 132 and 147	Rule 129(2) is amended to give effect to the principle that prepayment meters can have remote displays.
	Rule 147(1) is amended to ensure this provision (which deals with deemed customer retailer arrangements for move-in or carry-over customers) applies where a prepayment meter is at a secondary settlement point.
Rule 151	<b>Exempt selling regime:</b> The final rule inserts a new rule 151(1A) to state that the classes of persons in respect of whom an exemption is registrable may include persons (not being retailers) that are financially responsible for secondary settlement points within the premises of large customers. The NERL governs when a FRMP for a secondary settlement point requires a retailer authorisation or exemption. The transitional rules require the AER to review the retail exemption guidelines to consider whether a new registrable exemption class should be made.
Rule 167	<b>AER retailer performance reports:</b> Rule 167(3) is amended to require the AER retailer performance report to include information by reference to supply to

	premises with and without secondary settlement arrangements.
Schedule 1, Mode	el T&C for standard retail contracts
Clause 4.3	Clause 4.3(b) provides that when vacating premises, the retailer must use its best endeavours to arrange for the reading of the meters. The final rule amends the clause to confirm that 'reading' a meter in this context refers to a person attending the premises to do so.
Clause 5.1	In clause 5.1(a), the references to the retailer's obligation to provide a meter are amended to refer to the provision, installation and maintenance of the meter for the premises. Whether the retailer has to provide the meter for a secondary settlement point would depend on the equipment at the point, for example an EV charger owned by the customer may incorporate its own meter.
Clause 6.3	Clause 6.3(d)(iii) explains the retailer's obligations to provide notice of supply interruptions to premises with life support equipment and is amended to align with changes to the NERR that extend the requirements to de-energisation of any secondary settlement point.
Clause 8.3	Clause 8.3 explains that the customer can be transferred to a different tariff if the customer ceases to be eligible for its existing tariff due to a change in use of energy. This is amended to extend it to 'other change to the supply arrangements' at the premises to accommodate changes such as removing or disabling an EV charger that had previously been an SSP.
New clause 8.3A	New clause 8.3A explains that if the customer has provided the meter at a secondary settlement point and the meter no longer operates in accordance with the requirements of the energy laws, the retailer may transfer the customer to a new tariff.
Clause 9.3	Clause 9.3 deals with estimates of energy usage. It is extended to refer to later collection of metering data, as well as meter reads.
Clause 11	Clause 11 deals with meters. Subclause (a)(1) is amended to clarify the right to access to maintain etc meters applies only where required to meet obligations under energy laws. Subclause 11(d) is amended to clarify that the retailer would only replace meters that it is responsible for providing under energy laws.
Schedule 2, Mode	el T&C for deemed standard connection contracts
Clause 9.1	Clause 9.1(a) is amended to clarify that the rights of access described in the clause only operate to the extent permitted under the energy laws.
small generator	The final rule amends 'small generator' to clarify that it includes a battery.

# **Defined terms and abbreviations**

## **Defined terms**

**Consumer energy resources (CER):** Flexible load and generation at consumers' premises. CER assets include rooftop solar panels, batteries, home, and business energy management systems, pool pumps, and electric vehicles (and charging), as well as 'newer smart devices' such as hot water systems and traditional controlled hot water. For large customers, these can include heating and air conditioning (HVAC), on-site refrigeration, and on-site backup generation. We also include distributed energy resources (DER) such as community batteries for the purpose of this paper.

**Flexible trading of CER:** Consumers can take up different product and service offers for their CER. For the industry, it means consumer resources and consumption can be better enabled to use in the wholesale energy and ancillary services market and for network services.

**Connection point:** Connection point is used throughout the rules (and in the electricity sector) to mean the point which is both:

(a) the physical point of connection between the consumer's premises and the distributor's network, and

(b) the point at which energy is measured for market settlement.

**Secondary settlement point:** Points at a consumer's premises that would be behind the existing connection point (referred to as the primary connection point), which would have a National Metering Identifier attached to them, and would be able to be separately identified in AEMO systems. This is a new term established in the electricity rule.

**Market connection point**: Refers to connection points for which a Market Participant is financially responsible. The electricity rule amends this definition to allow a secondary settlement point (including a small resource secondary settlement point) to be classified as a 'market connection point'.

**National Metering Identifier (NMI):** Each metering installation associated with a connection point (or in the case of this paper, settlement point) is identified in MSATS with a unique NMI. A NMI for a connection point is generally generated by the local distribution network.

**Financially Responsible Market Participant (FRMP):** Entities (e.g. retailers or aggregators) that a consumer would contract with for services provided at settlement points, where those services are traded in the wholesale markets. A FRMP does not necessarily have to be an authorised energy retailer (this will depend on whether it sells electricity to its customers), but, as defined in the NER, must be registered by AEMO to be able to participate in wholesale markets.

**Small Resource Aggregator (SRA)**: A registered participant role within the NEM. An SRA supplies electricity from one or more small generating units or bidirectional units to the NEM and is financially responsible for the electricity provided.

### Abbreviations

AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
CER	Consumer energy resources (see above)
CMS	Central Management System
DNSP	Distribution network service provider
EAP	Energy Advisory Panel (replacing the ESB)

ESB	Energy Security Board
EVSE	Electric vehicle supply equipment
FCAS	Frequency control ancillary services
FRMP	Financially responsible market participant (see above)
FTM2	Flexible trading model 2, AEMO's term in the rule change request for its proposed approach to flexible trading (see above)
IPWEA	Institute of Public Works Engineering Australasia
LNSP	Local network service provider
MC	Metering coordinator
MDP	Metering data provider
MEFM	Minor energy flow meter
MP	Metering provider
MSATS	Market Settlement and Transfer Solutions
NECF	National Energy Customer Framework
NEL	National Electricity Law
NEM	National Electricity Market
NEO	National Electricity Objective
NER	National Electricity Rules
NERL	National Energy Retail Law
NERO	National Energy Retail Objective
NERR	National Energy Retail Rules
NMA	National Measurement Act 1960 (Cth)
NMI	National metering identifier (see above)
NPV	Net Present Value
NT Act	National Electricity (Northern Territory) (National Uniform Legislation) Act 2015
SRA	Small resource aggregator (see above)