



Ms. Jessica Curtis  
Senior Advisor and Project Leader  
Australian Energy Market Commission (AEMC)  
[www.aemc.gov.au](http://www.aemc.gov.au)  
Lodged online

16 February 2023

Dear Ms. Curtis,

**RE: Submission to the AEMC Unlocking CER Benefits through Flexible Trading Rule - Consultation Paper**

sonnen Australian (sonnen) is pleased to provide a response to the AEMC's Consultation Paper (ERC0346) and supports the objectives in this regulatory reform at this critical time of a consumer-led system transition. sonnen acknowledges the Commission's proactive efforts in fostering a regulatory environment that will enable an orderly, well-governed transition<sup>1</sup>

sonnen was founded in 2010 in Germany and is now one of the global market leaders in smart solar energy storage with more than 80,000 residential sonnenBatterie systems installed worldwide. We have a rapidly growing Australian presence and an Australian HQ in South Australia. Our vision is for clean, affordable energy for everyone — energy is an essential service, and we are committed to the democratization of energy<sup>2</sup> — 'designing a system that works for the full spectrum of customers<sup>3</sup>'. sonnen is at the cutting-edge of implementing household CER coordination, and specifically, residential battery energy management systems.

**sonnen has institutional lived experience of the costs and the opportunities of this consumer-led system transition — with unique, real-world, Behind-the-Meter (BtM) insights of Australian consumers.** Further, as an innovative new entrant with an understanding of the emerging global markets compared to Australia we have

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<sup>1</sup> See the Finkel Review, Chapter 3: A reliable and low emissions future – The need for an orderly transition *in* The Independent Review into the Future Security of the National Electricity Market: Blueprint for the Future, Commonwealth of Australia 2017

<https://www.energy.gov.au/publications/independent-review-future-security-national-electricity-market-blueprint-future>

<sup>2</sup> sonnen recognises the work of the AER in designing an energy equity strategy which incorporates the democratic principles of participation, affordability, and representation through the consumer voice and lived experience, see <https://www.aer.gov.au/retail-markets/guidelines-reviews/towards-energy-equity-a-strategy-for-an-inclusive-energy-market> [report, Oct 2022]

<sup>3</sup> Anna Collyer, AEMC & ESB Chair, speech, Implementing the ESB's post-2025 market design reforms, 7 June 2022. <https://www.aemc.gov.au/news-centre/speeches/implementing-esbs-post-2025-market-design-reforms>

further unique insights; as well as the critical equipment installer perspectives which provide depth to bottom-up policy implementation strategies as part of sonnen's business model.

sonnen's behind-the-meter consumer learnings support the acceleration and scaling-up of the emergent Virtual Power Plant (VPP) industry in Australia. sonnen believes the Commission's criteria of consumer outcomes; safety & reliability; flexibility; costs; and decarbonization are a sound foundation of assessment, and sonnen broadly supports the Commission's rule change proposal.

Given the world-leading pace of change in Australia's electricity sector, with over 3 million residential rooftop solar systems providing over 8 per cent of the country's electricity needs, these small-scale customer owned assets should be more optimally deployed, rather than continue, on the whole, to be **stranded-flexible-assets**. Fundamentally, sonnen must endorse the opening the market to increased competition, new entrants, and innovative products and services that reflect Australian consumer demand and values. sonnen believes that implementing VPPs and *coordinating flexible loads* is a critical and inevitable step in Australia's energy system transition.

Overall, the fundamental argument is that it is a massive efficiency gain (asset utilization, power system support, portfolio risk management) from deploying smart coordinated 'flexible CER'. At the moment emergent firms can't do that effectively because of the infrastructure that's built around a traditional retailer arrangement that's just too cumbersome and too expensive for innovators to tackle.

Therefore, sonnen recommends a sub-meter with a lighter regulatory arrangement than the primary meter. The asymmetry in bargaining power between a retailer and an aggregator squeezes the margins of the aggregator so hard they can't provide much of a benefit back to the consumer, the retailer wants to keep all the benefit. We don't think that's beneficial for the consumer from a competition perspective. The secondary meter opens-up the minor flows to competition, and **VPP coordination facilitates data-driven decisions that are customized to consumer preferences- that unlocks efficiencies and ultimately allow consumers to express their preferences.**

sonnen endorses these consumer-centric and technical points to the Commission:

### **Consumer-centricity**

- Australian energy consumers *must be placed centrally* to the energy system transition and the proposed rule change appears demonstrative of this commitment.

- **The voice of the consumer:** as a consumer centric brand sonnen attracts engaged consumers seeking to manage cost of living pressures and participate in the renewable energy transition. We have invested in conversations with our customers which shape the evolution of our products and services. The ability to respond to consumer preferences is central to license to operate CER on behalf of the consumer. sonnen customer surveys and conversations highlight values which are aligned to this consultation:
  - lowering energy costs
  - increased self-sufficiency
  - supporting the renewable energy transition
  - greater visibility of energy flows and use of ‘flexibility’
- **Consumer agency, complexity and trust:** sonnen recognizes the critical issues around agency and trust<sup>4</sup>, complexity and data transparency and we welcome a bottom-up approach to evidence collection including a commitment to incorporating the consumer voice and lived experience<sup>5</sup> as a fundamental co-design approach to system change.
- **Consumer values in a transitioning system.** The pace and scale of the energy system transition stops with the consumer: consumer preferences, and whether they see value in adopting a new technology (such as VPPs) depends on the quality of information provided and if it is provided from a trusted source, such as accredited installers.
- **Building trust to incentivize CER participation**
  - sonnen’s conversations with consumers, household energy portals, and VPP Activity Reports aim to improve CER engagement through clear and understandable information provided to consumers on benefits values encourage participation where it aligns with their values. Tier 1 and Tier 2 retailers have been slow to provide consumers the low-friction environment and transparency needed to incentivize CER participation. AEMO’s secondary settlement point proposal provides a lower barrier of entry for **task specific CER implementation**. AEMO’s proposal is appealing on the ability to deliver timely and clear information to the consumer — see Appendix C for a more detailed discussion on how end-user preferences and decision-making can be supported with a bottom-up approach.
  - Utilities, new entrants, and governments alike could educate and build trust that the system and technology is reliable. Trust is also built from the bottom-up; sonnen’s lived institutional

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<sup>4</sup> Empirical research on issues of consumer agency, trust, complexity and engagement shows that these consumer attributes are necessary pre-conditions for upscaling VPPs, but that incumbent retailers can indeed strategically adapt <https://www.tandfonline.com/doi/abs/10.1080/09537325.2021.1896698>

<sup>5</sup> For an example of the granularity and diversity of the consumer lived experience and responses to technology in social science research in an ARENA smart battery case study <https://www.sciencedirect.com/science/article/abs/pii/S2214629620302310>

experience with installers and customer service agents shows us who ‘walks the talk’ on consumer-centricity builds the trust to unlock CER flexibility.

### Key feedback on AEMC proposed models and technical matters

- **Metering configuration:** sonnen is comfortable that ‘**subtractive metering**’ can be successfully deployed with an additional benefit that the primary meter sees both loads in the underlying data stream. The primary meter data stream can be used to detect potential failures of the secondary meter data stream. ‘**Parallel metering**’ is likely to be workable but sonnen remains wary that installation may be more complex for installers. We do not endorse ‘**multi-element metering**’ due to the additional complexity and challenges in future expandability.
- **Regulation light:** sonnen encourages a ‘regulation-light’ approach to the secondary or child meter, where minimum standards are met by the primary point rather than the secondary point; and that, reflecting consumer choice, that the secondary meter is optional.
- **Weighting of assessment criteria:** we endorse shifting the balance toward consumer impact and encouraging uptake of ‘flexible CER’.
- **DOE:** Co-ordination of multiple flexible CER with respect to the application of Dynamic Operating Envelopes needs to be resolved under the existing Rules and is not a challenge unique to the establishment of a secondary connection point.
- **Life support:** equipment should only be placed on the Primary Meter.
- **Stranded flexibility:** to maintain a reliable and secure grid as the power system transitions to greater reliance on variable renewables, the access to flexible load will be required. However, the high costs associated with accessing CER flexibility value streams via traditional retailer models acts as a disincentive to aggregators.
- **‘at pace’:** end users continue to be the dominant investors in the renewable transition and are driving rapid changes in energy production and usage. Responding ‘at pace’ to these investment decisions requires agile retail arrangements adept at extracting value from CER to improve the consumers return on investment. The co-mingling of ‘flexible’ and ‘non-flexible’ load and resources in traditional retailer arrangements has been slow to deliver returns to consumers. sonnen supports the decoupling of ‘flexible’ resources from the less agile primary retailer arrangement via the mechanism proposed in the consultation paper.

- **Consumer value created from placing ‘the right risks in the right hands’:** most tier 1 and tier 2 retailers have been slow to roll out bespoke retail products specifically designed to extract the unique value available from co-ordination of CER. For example, most VPP electricity retail products from tier 1 and tier 2 retailers are structured around a ‘standard’ retail contract with an additional ‘VPP bonus’. Such products leverage retailers existing ‘top down’ portfolio risk management approaches and existing billing platforms but fail to deliver to the consumer the full potential benefits of co-ordination. The emergence of electricity retail products built upon ‘bottom up’ risk management methods which focus on exercising ‘flexibility’ behind the meter before energy market exposure is created is a necessary improvement in market risk management. Classical ‘top down’ risk management tools fail to disrupt underlying correlations in energy usage and progressively become less efficient as electrification of energy usage gathers pace.

Thank you for considering this submission. We look forward to continued participation in the consultation process.

Kind Regards

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**sonnen Australia Pty Ltd**

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**Attachments:**

**Appendix A:**  
Detailed responses to the AEMC Consultation Paper Questions  
**Appendix B:**  
Context for a ‘new courageous approach’

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## Appendix A

### Detailed responses to the AEMC Consultation Paper Questions

#### QUESTION 1: OPTIMISING AND OBTAINING VALUE FROM CER FOR CONSUMERS

*What are stakeholders' views on the value that consumers could obtain from their CER, and what incentives may be needed for consumers to take up opportunities that are or may become available?*

sonnen has established consumer products delivering value to our customers by deploying 'flexible' CER in the National Electricity Market (NEM). Value is delivered to our customers in the form of:

- cash payments for participation in energy and ancillary service markets.
- discounted electricity retail contract tariffs that recognize the value of deploying 'flexible CER' as a risk management tool.
- displacing greenhouse gas emissions from peaking generation by coordinating energy delivery from distributed battery storage when there is the greatest market need.
- supporting a community of likeminded individuals who value a transition to renewable energy 'at pace'.

Trust in a partner to deliver value from 'flexible CER' in a way that responds to consumer preferences is a significant incentive to take up opportunities that are or may become available. Residential CER owners are wary of placing too much trust in existing Tier 1 and Tier 2 retailers who are primarily focused on traditional electricity retail product models. Newer market entrants with a strong focus on listening and responding to consumer preferences as a principal business activity are more successful in encouraging consumers to take up 'flexible CER' opportunities.

*Would flexible trading enable consumers to optimise their CER in ways that align with their motivations and preferences?*

- Yes, entering into a flexible trading (FT) model with businesses focused on consumer centric service delivery is likely to encourage consumers to become prosumers<sup>6</sup> – using, generating, storing and selling their energy with greater agency and control over decision-making and higher participation in the energy market.

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<sup>6</sup> Findings from a current pilot, Project EDGE do have some limited experimental evidence of consumers wanting 1) increased control and visibility 2) cost savings, 3) personalised energy solutions and 4) support for renewable energy see <https://aemo.com.au/initiatives/major-programs/nem-distributed-energy-resources-der-program/der-demonstrations/project-edge/project-edge-news-and-knowledge-sharing>

- AEMO's model improves the prospect of new businesses unbundling the existing co-mingling of 'flexible' and 'inflexible' behind the meter components by providing consumers the opportunity to engage with a service provider specialized in unlocking consumer-owned 'flexibility' while retaining choice to access familiar energy retail contracts.

## QUESTION 2: EXISTING AND FUTURE CER PRODUCTS AND SERVICES

*Could the introduction of flexible trading create an environment that fosters the development of more innovative products and services that support consumers to optimise and obtain value from their CER?*

- Yes, through greater access to the market signals that FT would provide: Primary and secondary retailers will identify and respond to consumer demand for innovative products and services through FT. New market entrants established on more agile and responsive business models are likely to stimulate competitive responses from the larger mass market retailers.
- Increased market health through competition: FT incentivizes investment into innovative products and optimization services; regulation itself drives innovation by creating a more level playing field allowing for new entrants whilst ensuring safety and reliability. Further, an important but intangible benefit will be increased collaboration between consumers, government and the business sector which may drive bottom-up data-driven innovative solutions.

## QUESTION 3: BARRIERS TO ACCESSING CER VALUE

*Does having one connection and settlement point prevent consumers from accessing the full value of their CER?*

- Yes, the existing co-mingling of 'flexible' and 'inflexible' behind the meter components restricts consumers access to service providers specialized in unlocking 'flexibility'. At this point in time the CER customer base is small which does not incentivize large retailers to provide offerings.
- Without access to products that explicitly and efficiently tap the value from flexible CER, the value proposition for the consumer falls below the tipping point for where a consumer acts.

*The potential benefits of multiple settlement points:*

- Tailored energy management for consumers: Smart home battery systems, EVs and residential devices that are internet-enabled are driving the overall system towards an IoT-grid. As more of a household's energy load becomes internet-enabled, the flexible (higher risk) loads can be more effectively managed with a secondary settlement point.

- A secondary settlement point creates cost reflective price signaling, which is useful for consumers who can benefit from using their CER assets more fully, and this equates to consumer choice. Therefore, we do not agree with an argument of ‘hollowing out’ on incumbent retailers.
- Incumbent retailers will compete when the opportunities of unbundled capability are realized.
- Currently there are inherent cross-subsidies in industry with large pools of customers; customers behave differently in a non-cost reflective environment, and this reduces the drive to change. sonnen believes the big retailers do not really want consumers to change behaviours due to institutional inertia.

#### QUESTION 4: OPPORTUNITIES FOR MULTIPLE SETTLEMENT POINTS WITH ONE FRMP

*Could retailers provide greater value to consumers by adding extra settlement points at premises?*

- Potentially, however the trust barrier challenge is not necessarily resolved by establishing a secondary settlement point unless the traditional retailer ‘walks the talk’ of responding to consumer preferences across all the dimensions discussed above.
- If the visibility benefits of a secondary settlement point outweigh the costs of establishing a secondary meter, then the retailer should see a similar benefit that an additional independent party would. If a traditional retailer can adapt its risk management practices to utilize the opportunity of greater access to ‘flexible CER’ then the consumer should have a similar opportunity to benefit.

#### QUESTION 5: ENGAGING MULTIPLE FRMPs AT PREMISES

*Should the rules be changed to make it easier for consumers to engage with multiple FRMPs at premises?*

- Yes, this creates competitive pressure to get ‘the right risks into the right hands’ to ensure the customer has competitive access to optimization services. An incumbent retailer may not have the flexibility or the incentive to pursue every nuanced opportunity for the customer. New entrants face business risks as part of the learning and the process of innovation, within a complex regulatory environment, competing against incumbents<sup>7</sup>.

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<sup>7</sup> European research on accelerating socio-technical system change – specifically on ‘innovation intermediaries’ which smart battery installers are an example. A complex policy & regulatory environment, and high pace of technological innovation are closely linked with high risk for new entrants, see <https://www.sciencedirect.com/science/article/pii/S0959652617327129>

*Are there additional benefits or ways in which consumers could receive value through contracting with multiple FRMPs?*

- Improved efficiency in risk management by intelligently optimizing exposure and risk at an asset level, additional capability not directly benefiting the household can be aggregated to create further opportunity in the wholesale market.

*Of the challenges identified, would any benefit from a regulatory solution? If so, what are the potential options?*

- Consistency of application of network charges across DNSPs nationally would reduce complexity and the cost of implementation. A regulatory approach is likely to be required to establish a consistent framework for the allocation of network charges.

*Are there any additional challenges presented by having multiple FRMPs at one site?*

- The Commission has correctly identified that Dynamic Operating Envelope (DOE) allocation is a material consideration, however the challenges of allocation of DOE at a site is essentially the same optimization challenge of allocating feed in capability across multiple consumer-controlled 'flexible CER' devices.

#### QUESTION 6: MODELS FOR FLEXIBLE TRADING

*How significant are the challenges to establishing an additional connection point, and are there regulatory changes that could be made to overcome them?*

- Cost and jurisdictional service connection rules both act to restrict the establishment of additional market connection points.

*Would parallel settlement points behind a single connection point be an efficient option?*

- Potentially, provided cost reductions can be achieved.

*If so, what factors have changed since the Commission's decision on this in 2016?*

- Increased take-up of DER/CER including EVs, solar PV and batteries. Growth in businesses focused on meeting consumer preferences.

## QUESTION 7: ASSESSMENT CRITERIA

*Do you agree with the proposed assessment framework?*

- Yes, we agree with the framework and overall, we endorse shifting the balance toward impact on consumers.

*Are there additional principles that the Commission should consider as we make our decision, or principles included here that are less relevant?*

- To place the emphasis on consumer-centric assessment sonnen suggests considering a social-cost-benefit-analysis approach (social CBA<sup>8</sup>). Specifically, as a CBA includes a sensitivity analysis, a relative weighting biased toward promoting consumer choice should be considered. For example, a heavier weighting could be given to consumer interest and consumer engagement. Overall, expanding consumer choice should be emphasized. Further, consumer benefits should be weighted ahead of technical complexities that will be reasonably resolved via technological developments in the future. Nascent technology should not be considered the barrier in the energy system transition. More weight may also be lent to accelerating the renewables transition, as this also reflects the public good and consumer choice by and large.
- sonnen favours harmonization and standardization across Australia as much as possible.

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<sup>8</sup> For more on a governmental, social CBA methodology see NZ example <https://www.treasury.govt.nz/publications/guide/guide-social-cost-benefit-analysis>  
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#### QUESTION 8: COMPETITION ISSUES WITH SECONDARY SETTLEMENT POINTS

*What are stakeholders' views on whether the proposal would positively or negatively affect competition between FRMPs in this model (for example through a difference in regulatory costs), and could it cause anti-competitive behaviour? Are there regulatory solutions that we should consider to minimise those risks?*

- sonnen's view is increasing competition is a principal objective of establishing a secondary connection point. The increase in competition should not come at the cost of burdening other participants associated with the connection point with increased costs. Metering and settlement solutions should aim to be transparent to existing retailer systems. Any need to establish a relationship between the primary and secondary connection point retailers creates the opportunity for the primary connection point retailer to impede access.
- sonnen's suggestions to minimize potential anti-competitive behaviour include:
  - 1) Consumers should not be able to dynamically shift load between FRMPs; this might lead to gaming and unintended consequences. Dynamically shifting load invalidates potential efficiency gains from placing 'the right risks in the right hands', as the risk profile for both primary and secondary connection points cannot be adequately described.
  - 2) The purpose and volume of the secondary settlement point(s) should be well bounded. Not only does this support a greater focus as secondary settlement points for service provision (for example, heating/cooling as a service) rather than electricity supply, the primary settlement point retailer can make an informed view on the cost to service the primary load.

#### QUESTION 9: ALLOCATING NETWORK COSTS

*How should network costs be allocated for premises with secondary settlement points?*

- From the perspective of unlocking the greatest utility from CER flexibility a secondary settlement point, sonnen supports providing independent access to the most relevant network tariff. For example, a 'solar soaker' tariff for EV charging incentivizes price-responsive consumption. Furthermore, dynamic network pricing models could be supported under this approach.
- For network costs that may need to be 'unbundled' such as fixed daily supply charges, a cost allocation based on relative daily energy usage of the primary and secondary settlement points provides a stronger link to the underlying exposures managed by the respective primary and secondary retailer.

#### QUESTION 10: INFORMATION AND COMMUNICATION REQUIREMENTS FOR SECONDARY SETTLEMENT POINTS

*What are stakeholders' views on the need to include provisions in the rules regarding explicit information or communication requirements for secondary settlement points? For example, requirements for communication and information between the DNSP and the FRMP for the secondary settlement points (e.g. about network support or safety requirements, including those related to jurisdictional network safety), and/or 'primary' and 'secondary' FRMPs?*

- In sonnen's view the need for DNSP and secondary settlement point FRMP communication is largely dictated by the metering solution. For 'subtractive metering' the parent meter 'sees' the entire site and the DNSP should reasonably be able to derive any network impact based on primary meter data. Should parallel metering be implemented a relationship between the secondary settlement point FRMP and the DNSP may be required to acquire information relevant to network operations.
- Co-ordination of multiple flexible CER with respect to the application of Dynamic Operating Envelopes needs to be resolved under the existing Rules and is not a challenge unique to the establishment of a secondary connection point.

#### QUESTION 11: POTENTIAL FOR LIMITATIONS APPLIED AT SECONDARY SETTLEMENT POINTS

*Is there a need for limitations at the secondary settlement point? If so, how could these be applied? What are your views on doing so using requirements for the metering coordinator as proposed by AEMO?*

- With potential exceptions for 'street furniture' sonnen support restricting secondary settlement points to 'controllable/flexible CER'. An additional benefit of this approach is improved harmonization with market visibility or dispatch models (for example, Scheduled Lite).
- sonnen recommends that consumers should not be able to dynamically shift load between FRMPs; this might lead to gaming and unintended consequences. Dynamically shifting load invalidates potential efficiency gains from placing 'the right risks in the right hands', as the risk profile for both primary and secondary connection points cannot be adequately described.
- Both the primary and the secondary loads need to be clearly established and have static boundaries.

#### QUESTION 12: IMPLEMENTATION ISSUES FOR SECONDARY SETTLEMENT POINTS

*How should the NMI for a secondary settlement point be established?*

- A robust, reliable, and efficient process for the allocation of a secondary settlement point NMI is critical to the integrity of NEM processes. Either expansion of the LNSP current activities or the establishment of a NMI Service Provider may reasonably achieve these objectives in sonnen's view.

*How could market settlement be best enabled for secondary settlement points?*

- sonnen believes the secondary settlement point should be settled like any other settlement through AEMO processes (where necessary utilizing ‘subtractive metering’) to minimize implementation costs by leveraging established processes.

*Would subtractive settlement lead to issues in practice, for either the primary or secondary FRMP?*

- sonnen hasn’t identified any practical issues that would restrict the use of subtractive settlement provided the metering data and settlements revision processes can accommodate revisions to the underlying meter data.

#### QUESTION 13: CONSUMER PROTECTIONS

*What are the potential consumer risks and protections required under AEMO’s proposal for secondary settlement points, and should they be handled as proposed by AEMO?*

- sonnen believes ‘explicit informed consent’ is central to protecting consumers, and that secondary settlement points must only be established on an opt-in basis.
- Secondary settlement arrangements should be no more complex for the consumer than having one retailer for electricity and another for natural gas. From this perspective, limiting the classes of secondary settlement point activities may be useful and requires further consideration.
- Consumers, particularly vulnerable consumers, must not be worse off under this new rule and we agree in principle with the Commission that the NERR should not need to change at this time because of the relationship between the metering points - this might require some further consideration.
- Life support systems should remain connected to the primary meter.

#### QUESTION 14: METERING REQUIREMENTS FOR SECONDARY SETTLEMENT POINTS

*Are current NEM metering installation requirements likely to limit the uptake of secondary settlement points and the associated benefits?*

- Yes, for both cost and practical limitations.

*If changes are needed, what of the following minimum requirements need to be set in the NER for market participation and settlement at secondary settlement points?*

*A physical display at the metering point:*

- Not required, expensive, unnecessary additional hardware which is likely to thwart deployment at scale.

*Minimum service specifications:*

- sonnen supports AEMO's proposition that not all Minimum Service Specifications are relevant, particularly if the scope of secondary settlement points is restricted to specific activities/devices.

*Remote communications:*

- sonnen supports AEMO proposal that remote communications are necessary for secondary settlement point meters. The utilization of the household interconnection connection for the provisions of remote connection should be considered reduce overall costs.

*Accuracy and data requirements:*

- Minimal, and these can be cross-referenced against the Primary.

*Should changes be made to the accreditation and registration of metering providers and metering data providers for secondary settlement points?*

- Yes, already proposed by the Commission - required for compliance - accuracy, standardization, record keeping, accountability and transparency.

**QUESTION 15: MINOR ENERGY FLOW METERS FOR USE AT SECONDARY SETTLEMENT POINTS**

*Should the requirements that apply to type 4 metering installations be amended to create a new minor energy flow metering installation, or are there more flexible regulatory approaches to enable market settlement for secondary settlement points?*

- Yes, simplification of metering with the view to materially reduce costs lowers barriers to 'flexible CER' uptake.

*Are there other changes to requirements for type 4 metering installations that should also be considered for a minor energy flow metering installation?*

- sonnen views lowering the total cost of the metering solution (hardware + data collection) as a key success factor to facilitating the development of new products and services centered around the secondary connection point. Paths to lower costs may include:
  - **Security:** where secondary metering is included within a non-user serviceable device a lower standard of tamper protection may be warranted.
  - **Communications:** greater reliance on established internet infrastructure for meter data collection.
  - **Meter hardware:** reduced need for displays, potentially linked to end user access to data portal.

## Appendix B

### Context for a ‘new courageous approach’

#### A new courageous system approach is called for, rather than sub-optimal incremental changes.

This submission outlines the new entrant, regime-level (system-scale) business approach, as well as risks faced by new entrants compared to retail incumbents due to structurally different approaches. Here, we propose a consideration of a Bottom-Up Model of risk management in the context of a decentralized and consumer-led energy transition.

A consumer-centric approach is marked by a modern, data-rich, customized offering. This is important because the approach that is taken fundamentally shapes the current energy system; the regulatory directions taken now will have significant future effects on consumers and industry.

Here, sonnen outlines what is a paradigm-shifting (and potentially uncomfortable) approach for incumbents, but which will likely be key to the success of a consumer-centric energy business in a future grid. Incumbents can adapt<sup>9</sup>.

#### **Bottom-up risk management matches the scale and direction of the energy system transition that is granular and consumer-centred.**

In a Bottom-Up Model, the focus is on identifying and resolving smallest problems and then integrating them together to solve the bigger problem. In the more common Top-down (portfolio) Model, the focus is on identifying aggregate risks and treating them as a whole.

A bottom-up model of risk management is well suited to managing customer-owned resources and flexible loads for the following reasons:

**Increased Granularity:** A bottom-up model of risk management provides a more granular view of the risk associated with individual customer-owned resources and flexible loads, allowing for a more precise assessment

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<sup>9</sup> AGL is an example of an adapting incumbent at the household scale <https://reneweconomy.com.au/agl-looks-to-evs-batteries-and-rooftop-solar-as-it-goes-local-and-digests-massive-loss/>

of risk. This can help to ensure that the appropriate risk mitigation measures that recognize consumer preferences are put in place to protect both the customer and the grid.

**Better Visibility:** A bottom-up model of risk management provides better visibility into the risk associated with individual customer-owned resources and flexible loads, allowing for more effective risk management and mitigation. This can help to improve the efficiency of wholesale market hedging and inform DNSP's and market operators of locational specific CER behaviour thereby improving the security and reliability of the power system (for example, AEMO Scheduled Lite and Project Edge).

**Improved Customer Engagement:** A bottom-up model of risk management can help to improve customer engagement by providing customers with a better understanding of the risks associated with their energy usage and the opportunities for reducing these risks. This can help to increase customer trust in the energy system and to encourage the adoption of more sustainable energy practices.

**Improved Resource Utilisation:** By managing the risk associated with individual customer-owned resources and flexible loads, a bottom-up model of risk management can help to ensure that these resources are used in the most efficient and effective way. This can help to improve the overall performance and reliability of the energy system and to reduce the cost of energy.

**In summary:** A bottom-up model of risk management is well suited to managing customer-owned resources and flexible loads as it provides a more precise and granular view of risk, improves visibility and customer engagement, and helps to ensure that resources are used in the most efficient and effective way.

**Small innovative firms and new entrants are struggling:**

- New market entrants that have innovative offerings for consumers are struggling in the current policy and regulatory environment. VPP providers are at the cutting edge of innovative and flexible consumer offerings in this space.
- sonnen, as a new entrant to the Australian market sees the high amount of effort; the costs; and investment in learning. sonnen has put in place commercial arrangements with partners that effectively breaks down some of these barriers, and that process is expensive.

**Incumbent retailers understandably have institutional inertia:**

- **The vast majority of access to market cash flows** are in the hands of the incumbent retailers. Incumbent retailers control the customer and all the cash flows at the customer site and it's understandably nontrivial for incumbents to break that relationship. When assessing flexible trading relationship where you're establishing two or more auxiliary measuring points it can start to unlock that flexibility and can

start to allow risk management to occur from the bottom up. This speaks to making decisions that are fundamentally informed about what's happening at the site; good, well-informed decisions that have a more certain (predictable) outcome. However, the big retailers are not incentivised to change and are faced with overcoming institutional inertia with large billing engines, lack of agility in offerings and locked-in-skills as discussed more in the next point.

- **Skillsets – “locked-in competencies”:** Large retailers have skillsets and locked-in competences, which makes change unattractive. A renewable transition ‘at pace’ requires tapping new data centric and consumer focused skill sets.