

16 February 2023

Anna Collyer
Chair
Australian Energy Market Commission

Dear Ms Collyer,

**RE: AEMC Consultation Paper on Unlocking CER Benefits through Flexible Trading
(ERC0346)**

Wattwatchers Digital Energy (Wattwatchers) welcomes the Australian Energy Market Commission (AEMC) Consultation Paper on Unlocking CER Benefits through Flexible Trading. We appreciate this opportunity to provide early feedback, at this initial stage of this AEMO-initiated regulatory policy investigation process, for which we thank the AEMC and its team.

While much of the content of the consultation paper deals with matters outside of Wattwatchers' typical operating territory, we are pleased to provide inputs in regard to the concepts of a 'minor energy flow meter' and a 'secondary market' behind the customer's meter. In our view, there is real merit for both of these concepts, and also many ways in which they can be expanded on and improved to deliver clear benefits to consumers, the electricity system, and the emerging marketplace for 'New Energy' solutions and services, including but not limited to real-time energy transactions and integration with smart home automation and features.

Wattwatchers has developed and operates a leading digital energy platform, in Australia and internationally, enabling fast, powerful and scalable solutions to monitor, analyse and control electrical circuits in real time – maximising the benefits from renewable energy, green building, and carbon and energy management.

Our solutions suite spans devices, datasets, analytics, software and Internet of Things (IoT) connectivity, for energy and non-energy applications across home, community, commercial and industrial, and utility use cases. Our open business model promotes technology collaborations, with dozens of third-party partner integrations with our REST API - in Australia, and internationally.

Product brands include Wattwatchers (hardware and data to the cloud), the MyEnergy/mydata.energy (mobile app) and ADEPT (an agile IoT platform for managing multi-technology fleets in real-time). Multi-year projects include My Energy Marketplace (2019-2023), backed by \$2.7 million in grant funding from the Australian Renewable Energy Agency (ARENA)*; and Heyfield MyTown Microgrid (2020-2023), supported by a \$1.75 million grant from the Australian Government through the Regional and Remote Communities Reliability Fund (RRCRF).

Data from Wattwatchers-made behind-the-meter monitoring devices is used by the Australian Energy Market Operator (AEMO) in ARENA-funded projects to support the integration of higher levels of distributed rooftop solar generation into electricity grids.

We respectfully submit that this unlocking CER benefits/flexible trading arrangements consultation being initiated by the AEMC, in response to AEMO, raises many issues and challenges which could be better considered as part of a more holistic approach to digitalisation and data-driven solutions for the electricity system.

Currently we are seeing, and attempting to respond coherently, to a series of regulatory and policy processes - at least some of which overlap in places, and are or may be relevant to this consultation - without the kind of high-level strategic overview which is being pursued in a comparable market, the UK: via its Energy Data Taskforce (2019)¹, which found in favour of more open access to energy data; and subsequently its Energy Digitalisation Taskforce (2022)², which is exploring the feasibility of a flexible, light-touch 'digital spine' to enable a smart energy transition.

As well as this consultation, Wattwatchers has recently responded to:

- The ESB Data Services Delivery Model consultation paper (closed for submissions on 13 February 2023);
- The National Energy Productivity Strategy (NEPS) consultation (closed for submissions on 3 February 2023);
- AEMC Regulatory framework for metering services review (now at draft rule consultation stage, and closed for submissions on 2 February 2023);
- The ESB Data Strategy Initial Reforms consultation paper (closed in August 2022).

Wattwatchers broadly supports the AEMC's long-term direction for a 'two-sided electricity market', with empowered consumers participating widely in an increasingly decentralised

¹ <https://www.gov.uk/government/groups/energy-data-taskforce>

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<https://www.gov.uk/government/publications/energy-system-digital-spine-feasibility-study#:~:text=The%20Energy%20Digitalisation%20Taskforce%20report,shared%20in%20near%20real%20time%E2%80%9D>

electricity system. In the medium to long-term electricity future that Wattwatchers anticipates, there will be numerous sources of both electrons and data, many on the customer side; and the path to a highly-functional, cost-effective and truly competitive and customer-engaged energy marketplace will not be achieved by a piecemeal, incremental patch-up approach to innovative digital and data-driven technologies.

To maximise both customer benefits and system performance, we submit respectfully that the AEMC, and the system it makes the rules for, need to progressively create the space for a diverse range of technologies, data services and business/service models. There are aspects of AEMO's proposed solution path that triggered this consultation which suggest a rather unsophisticated approach, in technology terms, which on the face of it seeks to centralise remote control down to consumer appliance level in an ever more decentralised system. This needs to be considered carefully, both in its own right, and in the context of other processes including the still uncompleted AEMC metering review.

Thank you for this consultation opportunity. This submission includes Wattwatchers' own further recommendations, and our responses to relevant consultation questions. We will welcome future opportunities to contribute to solving the shared challenges of the energy transition.

Yours truly,

Gavin Dietz, CEO, Wattwatchers

**ARENA ACKNOWLEDGEMENT AND DISCLAIMER: This project is receiving funding from ARENA as part of ARENA's Advancing Renewables Program. The views expressed herein are not necessarily the views of the Australian Government, and the Australian Government does not accept responsibility for any information or advice contained herein.*

WATTWATCHERS OVERVIEW & RECOMMENDATIONS

Ultimately, today's customers mainly want electricity that is affordable, always-on and of good quality to power and protect their appliances and electronics, keeping the lights on, but doing a lot more too. They expect to be billed fairly and accurately. Many also expect good environmental attributes.

Others - the prosumers - want to maximise the value of their own energy investments, such as the one third-plus of Australian households with rooftop solar, and often are willing to invest in their own additional remote metering, monitoring and control solutions. This subset may also be willing to support the grid's operational stability and effectiveness, but for many only if they get the right services and information to empower them as small-scale market participants; and, for many, only if they can 'override' any control of 'their stuff'.

Choice is critical to meeting all of these needs, and a secondary market for customer-facing, behind-the-main-utility meter energy services, as is at least partly envisaged in the AEMC's current flexible trading consultation (*Unlocking CER benefits through flexible trading - ERC0346*), is an opportunity to allow greater diversity of solution providers, technologies and service/business models for a more dynamic, flexible and enticing (for consumers who in many cases will own the CERs) trading environment behind-the-utility-meter. If 'unlocking CER benefits' is core to this agenda, then what consumers want and expect is critical to success.

Relevant to the AEMC's current metering review (EM00040), data from utility digital metering should be readily available to support the customer's experience, including power quality data, just as it is or most likely will be available to more traditional industry players; and customers should have the choice and the capability - via supporting technologies such as APIs - to share their utility meter data with third-party service providers of their own choice, for their purposes (which could, for example, include getting independent expert advice on the power quality they are receiving, and whether poor quality supply is impacting on them e.g. affecting rooftop solar performance or damaging expensive home and business electronics).

In advancing the ERC0346 exploration, Wattwatchers strongly supports the concept of a more technically and commercially flexible 'minor energy flow meter', including for use at currently non-metered sites such as street furniture and facilities (where Wattwatchers and similar devices are already deployed to support energy management and cost allocation). We would, however, suggest that 'minor' should be replaced with 'secondary' or 'auxiliary' or a similar term to reflect the fact that some of the likely target loads may be quite 'major' in terms of their behind-the-main-utility-meter energy flows (e.g. EV charging).

To help illustrate our submission that ERC0346 is stepping into the consumer zone, where different expectations apply to traditional energy industry ones, a recent report from US research house Parks Associates is relevant. Under the heading **‘Consumers want a single source for smart home device control’**, which speaks strongly to integration and interoperability, the report summary³ says in part (emphasis is ours):

*Connected devices in the home can provide more information on energy consumption, including load profiles at start-up and runtime profiles during operation. The combination of these data sets allows consumers to understand how the operation of each device impacts their utility bill and could lead to more actionable guidelines to reduce their energy costs. Getting this disaggregation data can be difficult, and many current utility programs offer data only in 15-minute intervals, **while consumers today are accustomed to real-time data**. These challenges are exacerbated by the nature of today’s smart home ecosystem, which consists of many disparate devices from different manufacturers. The standard smart home buyer journey today is via retail, often one device at a time, creating an experience where consumers are using multiple apps to control their devices. Therefore, control is not unified, and data is often not shared among devices, creating a disjointed consumer experience. These conditions have inhibited the growth of the smart home market into the mass market. Some level of unified control is available via smart home hubs, security providers, internet service providers (ISPs), high-end custom instalments, and even the master smart home apps on common smartphone operating systems, but consumers want a more unified experience, with integrated automation and intelligence.*

In summary, Wattwatchers recommends that the AEMC factor in the following to its considerations:

- Integration and interoperability with smart home automation and the extended smart home operating environment
- Real-time visibility down to individual circuit-based energy flows behind the main utility meter (primary ‘settlement’ meter)
- Real-time transactions (e.g. financial rewards for participation in an opt-in demand response ‘event’)
- Bi- and multi-directional data flows between the regulated and non-regulated parts of the marketplace, and between industry-controlled ‘assets’ and customer-controlled ‘assets’

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https://www.linkedin.com/pulse/consumers-want-single-source-smart-home-device-control-/?midToken=AQF6AavMsZXcxA&midSig=122xnlhMfcjGE1&trk=eml-email_series_follow_newsletter_01-newsletter_hero_banner-0-open_on_linkedin_cta&trkEmail=eml-email_series_follow_newsletter_01-newsletter_hero_banner-0-open_on_linkedin_cta-null-l31uu~le33zd71~b5-null-null&eid=l31uu-le33zd71-b5

- Multi-function and multi-platform capabilities for the 'secondary energy flow meter' that enhance its value to consumers, the system and third-party solution providers.

WATTWATCHERS RESPONSES TO CONSULTATION QUESTIONS

Wattwatchers has confined its responses to consultation questions to those most relevant to our solutions and policy priorities. We believe that other stakeholders are better qualified to respond to many of the other consultation questions.

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.

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**
- **Minimum service specifications**
- **Remote communications**
- **Accuracy and data requirements**

Remote communications and relevant accuracy (Class 1) and data requirements should be included, but the minimum service requirements should be removed or substantially amended, and the physical display at the metering point should be deleted (in favour of display via an app or similar using data from the connected metering device).

Are there any other service or technical requirements that need to be specified for metering installations at secondary settlement points in the NER?

It is reasonable to expect that there could be additional requirements, depending on the markets in which any given secondary FRMP intends to participate.

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

Local, real time data should be available from primary meters, and secondary meters should be able to be installed by any licensed electrician. The primary meter could still be the 'source of truth' and the secondary meter could operate as an 'estimating meter' which is reconciled at least once a year with the primary meter (if both meters are genuinely Class 1 accurate, i.e. plus or minus 1%, then the maximum variance would be 2%, which we submit

is a tolerable level of difference for prolonged final settlement and any adjustments that might be required).

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?

As previously indicated, the term ‘minor energy flow meter’ should be amended to ‘secondary energy flow meter’ or ‘alternative energy flow meter’ or similar, as in some cases the energy flows may be quite substantial (e.g. EV charging). There should be an opportunity for multi-function, multi-platform devices to be used that can provide accurate data for billing as just one of their multiple outputs and use cases; while also accommodating other solutions and functionality that provide additional value for the customers, and potentially also the system and third-party service providers. In any case, there should be a review of minimum metering specifications following the completion of the AEMC review of the regulatory framework for metering services.

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

Yes. Anticipating that multiple FRMPs may be involved, real time data from each FRMP should be available to the other/others to enable the optimisation of generation, load and storage behind the meter. This should put the customer’s interest first.

What different obligations will need to be placed on metering providers and metering data providers for minor energy flow metering installations? Should these obligations be set out via AEMO’s proposed approach of new categories in the NER?

Metering providers should be obliged to provide the customer (and their authorised agents) with access, both locally and online through the cloud (e.g. enabled by an API), to real time data from the meter. Again, the customer’s interest should be paramount, and data should always be readily available to better enable customer participation in the energy system.

What would be an appropriate inspection and testing regime for minor energy flow metering installations?

A digital compliance regime, wherever practicable, enabled by appropriate digital energy technologies, will allow remote inspection and testing to replace on-site inspections.

QUESTION 16: MINOR ENERGY FLOW METERS FOR STREET FURNITURE

Should minor energy flow meters be able to be used for street furniture?

Yes. Moving from no metering to having efficient metering for street lighting and other public infrastructure is an improvement, and is achievable with known and proven solutions. The minimum meter specifications required can be reviewed as part of a broader re-evaluation, but in our view the current AEMC minimum specifications would be overkill for these use cases.

If so, should DNSPs be allowed to act as metering coordinator, metering provider, and metering data provider for street furniture under certain circumstances?

In principle Wattwatchers would support this and, if the right solutions are deployed, this could help DNSPs with better digitally-enabled visibility of the low voltage network.

Would any other changes to the rules be required in relation to metering for street furniture?

The current AEMC minimum metering specifications should be reviewed and amended/relaxed for these use cases, as should some outdated NMI pattern-approval requirements (e.g. display on device) - while maintaining Class 1 accuracy and using over-the-air testing and maintenance to verify and periodically re-verify metering performance.