

SUBMISSION TO:**AEMC Electricity network economic regulatory framework review
2019: Regulatory sandbox workstream (Reference Code EPR0068)****RESPONSE SCHEDULE:****Date:** 31 January, 2019**Company Name:** Wattwatchers Pty Ltd (trading as Wattwatchers Digital Energy)**ABN:** 47 123 010 588**Address:** Suite 2.01, 28 Chandos Street, St Leonards NSW 2065**Key Contacts for this Response**

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Sydney-based [Wattwatchers](http://www.wattwatchers.com.au) is a hardware-enabled energy data company. We create utility-grade solutions - mainly deploying behind the power company's meter - at consumer-accessible prices, 'working with' numerous third-party software applications.

We provide the real-time, highly-granular and cloud-connected monitoring, remote-switching and orchestration capabilities that will underpin the digital-and-distributed era for electricity, for use cases including: solar PV performance and optimisation, virtual power plants, demand response, measurement and verification (M&V), IoT integrations, artificial intelligence, EV deployment, and peer-to-peer trading, continuous payments and smart contracts (with and without blockchain).

Wattwatchers was profiled (p142) in [AEMC 2018 Retail Energy Competition Review](#).

Confidentiality (waived)

Please note that Wattwatchers does NOT regard this submission, in its entirety, to be commercial-in-confidence. It can be used, cited and published as the AEMC sees fit.

MAIN SUBMISSION

Introduction

Wattwatchers Digital Energy (the trading company for the Energy Saving Networks Group Pty Ltd) welcomes the AEMC including a 'regulatory sandbox workstream' in its *Electricity network economic regulatory framework review 2019*.

Our submission, which follows, comes from the perspective of a homegrown Australian EnergyTech start-up, now into the commercial scale-up phase. As such, and working primarily but not exclusively in the National Electricity Market (NEM), our company's progress and prospects, and our problems, frustrations and opportunities, are substantially shaped by the regulatory operating environment - both for the NEM specifically, and more widely.

Companies like Wattwatchers operate in a very asymmetrical commercial and regulatory environment, which is highly rule-bound, and in which large legacy electricity retailers, network businesses and metering companies are deeply embedded in an increasingly outdated but still powerful electricity system. They also typically run large regulatory affairs teams, backed by extensive legal resources, which are totally disproportionate by comparison to the resources that startups can bring to bear.

We urge the AEMC, through this consultation process and beyond, to specifically take into account the need, and indeed the opportunity to clear a better path for the technical innovation - and the fresh ideas, perspectives and business models - that startups bring to the table. Last year, in collaboration with several EnergyTech startups, Wattwatchers led the drafting of a policy brief for promoting greater innovation in the energy sector; in which the need for 'regulatory sandbox' arrangements was specifically raised.

The relevant section read:

1. **Innovation problem** - the current market frameworks, regulatory systems and prevailing business models are inhibiting energy-tech innovation, including restricting opportunities to propose, test, refine and prove-up, and ultimately go to scale with new and better solutions.

How to respond - proposed policy-based solutions include:

- Innovation 'sandpits' within the existing regulatory environments to allow commercial-scale piloting of solutions with targeted regulatory exemptions

- Further investment in incubation and acceleration programs, and energy clean-tech startup support and investment (e.g. grants, loans, financing, venture capital)
- Greater and more-focused use of government procurement to give innovators a head start on gaining market access (e.g. mandate PV with cloud-connected monitoring and control for all government and new buildings with suitable roof spaces)

The questions

QUESTION 1: OTHER SANDBOX EXAMPLES

Are there other examples of regulatory sandbox arrangements that are relevant when considering these arrangements for the NEM?

Wattwatchers urges the AEMC to look beyond such a limited pool of regulatory sandbox examples. We suggest it would be appropriate to conduct a workshop series with professional facilitation to develop a suitable model for use within the NEM. In doing so, we would ask that special attention should be paid to allowing energy technology startups, small companies and advocates - the creative engine room for innovation - to participate on a more equal footing with large embedded energy industry players than has historically been the case with regulatory processes. Any model that fails to ensure strong participation from the smaller, more nimble and positively disruptive innovation players risks missing the mark.

QUESTION 2: OTHER RELEVANT TRIALS

What other proof-of-concept trials are relevant when considering formal regulatory sandbox arrangements for the NEM?

As part of a workshop process, to develop a regulatory sandbox model with broad and active stakeholder participation, we recommend that further exploration be conducted in regard to:

- International experience in progressive jurisdictions for energy reform e.g. California in the US, Germany
- The New Zealand system, which is ahead of Australia in significant ways off the back of its early national rollout of smart meters (in the first half of the 2000s).
- Opportunities to sidestep NEM regulatory restrictions by running proof-of-concept projects on other Australian grids e.g. Western Australia, Northern Territory

Such further exploration should be built into an active stakeholder engagement process that is designed to be more informal and less legalistic than has historically been the case for regulatory reform processes.

QUESTION 3: BARRIERS TO PROOF-OF-CONCEPT TRIALS

(a) Are proof-of-concept trials being inhibited by current market regulations or processes?

Yes

(b) If so, what are the potential barriers to proof-of-concept trials that might be addressed by a regulatory sandbox initiative?

As summarised above, any such initiative needs to pay specific and substantial attention to including the startup/small company energy innovation sector. Currently market regulations processes advantage large incumbents and legacy players with deep experience of the system, which in many cases they helped to create, and extensive regulatory affairs and legal resources.

New innovative players in practice can only get into proof-of-concept trials by working with the incumbents, which is inherently one-sided because of the size imbalances involved, and the slow pace of change in the traditional industry (versus the need for speed that most startups have built into their entire existence). This gives rise to a common phrase among startups, being 'death by pilot'.

While it is unquestionably important that the innovators and the incumbents work together, and learn from one another, this regulatory sandbox review by the AEMC is an excellent opportunity to reset the processes, level the playing field to some significant extent, and break down the counterproductive imbalance.

QUESTION 4: ACCESS TO GUIDANCE ON THE REGULATORY FRAMEWORK

(a) Is there a lack of access to guidance for innovative new entrants on navigating the energy regulatory framework?

Yes to some extent, but as we articulate above, the more substantial problem is one of power and resource imbalance between emerging innovators and industry incumbents. Additionally, many of the rules themselves are outdated, reflecting a Grid 1.0 era when the world is moving on decisively to Grid 2.0 including - ever higher levels of Distributed Energy Resources (DERs) - existing market regulations and processes are no longer fully fit for purpose.

(b) If so:

- *What type of guidance is needed?*

Providing more guidance into market regulations and processes that themselves need to evolve and change is missing the key point. Active promotion of more diverse and better participation is required, rather than guidance per se. This is not an 'education' scenario, it's a re-engineer the system one.

- *Who should provide it?*

A broad reform process is required, and this needs to be informed by innovation sector participants as well as more traditional industry players.

- *Should guidance be coordinated across the AER, AEMO and AEMC?*

Reform should be coordinated across these three industry bodies, but wider participation should be pursued, including the Australian Renewable Energy Agency and its A-Lab, and Energy Consumers Australia (ECA).

- *How should the provision of guidance be funded?*

The reform process should be prioritised from COAG level down, and funded with both special project funding allocations as well as from agency budgets. Providing accessible and streamlined regulatory sandbox opportunities is a piece in a much bigger reform puzzle, which we submit requires a broad program to elevate the role of energy technology in Australia's energy transition, and to open up opportunities for new, innovative players including early-stage startups.

- *Should an application be required in order to gain access to detailed guidance? If so, what criteria should apply?*

An application process risks adding more regulatory burden for startups and small players. Where guidance into the workings of the current system is legitimately required or sought, the industry regulatory bodies should be proactively providing it as part of a position transformation agenda to drive innovation and to break down barriers.

(c) Is there a role for binding advice from market bodies on certain aspects of the regulatory framework to support proof-of-concept trials?

Possibly, but again the much more important issue is to actually reform the processes and open up participation.

QUESTION 5: TRIALS UNDER AER ENFORCEMENT DISCRETION

(a) Is the AER's ability to issue no action letters, provide waivers and exemptions, and use its enforcement discretion sufficient to facilitate proof-of-concept trials in the NEM? If not, why?

The whole emphasis should move from one of: 'Can the rules, including those enforced by the AER, be "worked around" under current processes?'. To one of: 'How do we proactively create an operating environment that promotes and enables innovation.'

Also, in our experience, the barriers may be beyond the ambit of the AER to exempt. For example, the 1960 National Measurement Act legislation that sets the requirements for billing meters (for any trade in electricity).

(b) Is there a need for a more formal process for proponents of proof-of-concept trials to seek a no action letter?

There is a need to establish a regulatory/system bias in favour of innovation including proof-of-concept trials.

(c) Should no action letters that facilitate innovation or proof-of-concept trials be made public?

If issued, then yes.

QUESTION 6: THE NEED FOR A FORMAL REGULATORY SANDBOX

(a) Would formal regulatory sandbox arrangements, where some regulatory requirements are relaxed on a time-limited basis whilst appropriate safeguards remain in place, serve to better facilitate proof-of-concept trials in the NEM?

Yes, if that is all that is on offer. We submit that a cultural change is required as well as a letter-of-law one. Proactive encouragement of innovation is the threshold requirement.

(b) What other regulatory tools are needed to facilitate proof-of-concept trials?

There is a need to think outside the box of 'regulatory tools' *per se*.

QUESTION 7: DESIGN OF A FORMAL REGULATORY SANDBOX ARRANGEMENTS, IF REQUIRED

(a) If required, should the objective of the formal regulatory sandbox arrangements be to facilitate further proof-of-concept trials in the NEM? If not, what should the objective be?

Yes, if required, however our submission clearly envisages focusing on a proactive process to encourage innovation, which would include regulatory sandbox arrangements where necessary to allow innovation activities to break through the barriers.

(b) If required, what metrics should be used to measure the success of a formal regulatory sandbox arrangement?

Metrics which show that innovation opportunities are being created, and that learning is being created and shared (whether or not individual activities and proof-of-concepts 'succeed' or 'fail' or fall in between the two.

(c) If required, what should be the high-level criteria for accessing a regulatory sandbox arrangement?

Demonstrate that relevant innovation is on offer i.e. addresses known, anticipated or predicted challenges and opportunities for the electricity system broadly defined, including for both the supply and demand sides.

(d) How could fairness be addressed in the case where proponents of similar trials apply to access sandbox arrangements but only a limited number of trials can be accepted?

Transparency will help. A policy of not reinventing the wheel is fine if everyone can see the wheels going around.

(e) If required, what should be the key features of a formal regulatory sandbox arrangement for the NEM?

- *What regulatory arrangements should be within scope to consider for relaxation?*

All regulatory arrangements that are relevant to innovation. Extra care should be taken if safety requirements are being put in scope, but nothing should be automatically taken 'off the table'.

- *What should be the safeguards for consumers?*

Where consumer protections are affected, or likely to be affected, then this can be addressed via making sure any participants are properly informed and via appropriate (and plain English) Terms and Conditions on an 'opt-in' basis.

- What obligations should be placed on the participants (e.g. knowledge sharing requirements)?

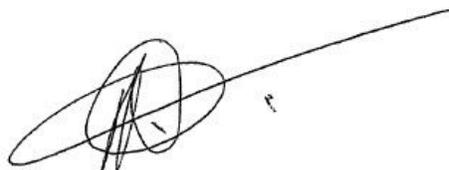
In particular, where innovation is being supported via public funding or regulatory exemptions, then knowledge sharing should be both required and actively promoted. ARENA's approach in this regard via its grants programs is a useful guide.

QUESTION 8: TRIALLING INNOVATIVE REGULATORY PROCESSES

How could formal regulatory sandbox arrangements be used to trial changes to regulatory arrangements to guide adoption of reforms across the market?

As per the above, we submit that formal regulatory sandbox arrangements should be a necessary tool within a bigger agenda to foster innovation. This should be driven by a proactive, wide-ranging reform agenda ('root and branch') rather than a narrow approach to opening up some 'cracks of access' through market regulations and processes as they currently exist. Speeding up the innovation process should be a primary objective, as well as ensuring access for new and smaller players.

SUBMITTED ON BEHALF OF WATTWATCHERS DIGITAL ENERGY BY:



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