4 January 2019

Mr Owen Pascoe
Director
Australian Energy Market Commission

Dear Owen

Evoenergy Response to Regulatory Sandbox Arrangements Consultation Paper

Thank you for the opportunity to provide comment and feedback on the AEMC Regulatory Sandbox Arrangements Consultation Paper.

Australia's electricity system operating environment is continuing to transform and evolve. The changes are being spurred by the emergence of new technologies, coupled with an increased customer awareness of how to take control of their energy usage. In this evolving environment, the opportunity for DNSPs to partner with private sector firms pioneering innovate solutions has the potential to deliver maximum value to customers.

We welcome the Regulatory Sandbox Arrangements initiative as an important component of the transformation of Australia's electricity system.

Our response sets out Evoenergy's experience and views as to how a regulatory sandbox could enable innovative solutions that would otherwise find it hard to reach the market. Our response is informed by our first-hand experience integrating innovative technologies to our network, the investments we have made and the trials we are currently performing.

As one of the most innovative networks in the country, we look forward to engaging further with the AEMC as it continues to explore and shape the case for regulatory sandbox arrangements.

Yours sincerely

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About Evoenergy

Evoenergy owns, operates, and maintains the regulated electricity and gas networks in the Australian Capital Territory. Our electricity distribution network supplies electricity to over 200,000 residential and business customers across the ACT and 146,000 gas customers in the ACT and NSW.

Evoenergy is at the cutting edge of innovation and is amongst the most versatile DNSPs in the country. In recent times, we have successfully trialled Virtual Power Plants that integrate and orchestrate consumer-owned, decentralised energy assets via a Distribution Management System. At Evoenergy we support and actively pursue innovation that benefits our customers and the business.

Our response to the Regulatory Sandbox Arrangements Consultation Paper

This response to AEMC's Regulatory Sandbox Arrangements Consultation Paper sets out our experience and views as to how a regulatory sandbox could enable innovative solutions that would otherwise find it hard to reach the market.

Our response seeks to inform AEMC of real examples, from Evoenergy's and peer networks' experiences, of cases where a regulatory sandbox would make innovative solutions that bring value to customers a reality.

At this initial stage of the process, we have decided to focus on building a case for pursuing a regulatory sandbox and have intentionally refrained from delving into the details of how the sandbox should work in practice. We hope that AEMC will choose to further explore arrangements for a regulatory sandbox and we will at that stage provide specific insights as to its form.

Who would a regulatory sandbox target and how would they benefit?

In deciding whether to invest the time and effort to develop a regulatory sandbox, it is important to consider who would use the process, and, where the maximum value can be extracted. Under the current rules, generators, networks, and retailers are regulated. The introduction of new rules, such as ring fencing, have sought to limit the ability of networks to operate outside of prescribed areas. In many respects, these rules have limited the ability of networks to innovate.

From Evoenergy's perspective, and in responding to question 6 of the consultation paper, we welcome the introduction of a formal regulatory sandbox should it allow network businesses and their partners to explore innovative solutions to known and emerging issues in a rapid manner. Ensuring that the sandbox allows for an express path to develop ideas that have significant benefits to customers and the innovators but that deviate from the current rules is critical to the success of a sandbox. Furthermore, it is important that the rules governing the sandbox are not overly regulated and time consuming to implement for the innovators. Whilst we support the need for appropriate controls, they should be formed with a view to expediting the outcomes the innovators are seeking to achieve and not be burdensome.

With the above context, below are some examples of cases where a regulatory sandbox could promote innovation trials which have the potential to unlock value for customers and networks. These examples address question 3 of the consultation paper by illustrating actual cases where current regulations are inhibiting innovative solutions and showing how a regulatory sandbox could amend this.

A regulatory sandbox can promote innovative voltage control solutions

Evoenergy in partnership with a private sector developer is currently undertaking a project to trial distribution transformer monitoring and voltage regulation devices to alleviate the impacts associated with increasing penetration of solar PV generation and batteries. The results of the trial will inform a larger rollout of Internet of Things devices and support the selection of the best value for money solution for Evoenergy.

The installed devices will be integrated into the ADMS system as a SCADA device to supply information to the ADMS allowing for real time monitoring and management of the LV network. Automating LV monitoring through the ADMS is a key strategy to proactively manage the network quality of supply, rather than reactively dealing with increasing numbers of customer complaints.

Of the two devices required, one is designed to be implemented beyond a customer's meter (thus outside the network boundary) and is therefore subject to the AER's ring-fencing guidelines. There are several technical reasons as to why the device is not able to sit on the network side of the meter.

A regulatory sandbox would potentially allow Evoenergy to trial such devices in a controlled environment without the additional effort and complexity of meeting ring-fencing obligations. Some potential benefits that could be tested through the trial are enhanced household-level monitoring for quality of supply parameters and maximisation of customer embedded generation output.

A regulatory sandbox can help address two-way power flow

Under the current regulatory framework, it is not clear whether the Australian Energy Regulator is able to approve investment in network led projects that seek to address reverse power flow and other power quality issues caused by high penetration rates of rooftop solar PV. Previous investment cases put forward by distribution network service providers have been declined by the Australian Energy Regulator, due to the lack of a business case demonstrating an economic basis for the projects.

At present, it is difficult for networks to obtain funding for projects that seek to address the technical challenges associated with hosting large amounts of DER, such as reverse power flow and voltage rise. Regulators are unlikely to approve investment in increasing hosting capacity unless economic benefits can be demonstrated.

Under the current regulatory regime, networks are not necessarily incentivised to proactively identify and put forward the case for further investment. Instead, networks may choose to use alternative and generally simpler mechanisms to limit export (such as export limited connection agreements and/or relying on inverter standards (AS4777)) to require tripping when voltage limits are exceeded. These

options tend to be preferred by networks as they are simpler and minimise the risks associated with safety, security and reliability.

While, in theory, current regulatory settings may enable such investment, via the market benefits test, to date no distribution network has sufficiently demonstrated such benefits to the satisfaction of the regulator. In responding to question 5 of the consultation paper, this suggests that the current settings which provide the AER with enforcement discretion may be insufficient in some cases to action investments.

Markets which enable the realisation of DER benefits to distribution networks do not currently exist and have not been the focus of existing studies, grant funding and/or market reform in Australia. Given the innovative nature of such a project, a regulatory sandbox would set out the regulatory pathway that would facilitate distribution networks to invest in enabling higher penetration of solar PV and other DER.

A regulatory sandbox can unlock investments in the provision of network services

In some situations, a lack of clarity in the NER can unintentionally create a barrier to the use of emerging technologies. These technologies have the potential to deliver not only the most cost-effective services, but also potentially the most reliable and safe services.

One aspect of the NER where a lack of clarity seems to stifle innovation revolves around the assets DNSPs in the NEM can invest in to provide distribution services. In responding to question 4 of the consultation paper, we welcome further exploration on establishing mechanisms for specific guidance from the regulator in areas where the rules are unclear.

A regulatory sandbox could help overcome the identified barrier by allowing an expansion of the term "distribution service" in the NER, which would provide network businesses and the AER the flexibility required to ensure the underlying philosophy of the regulatory framework is delivered. If a DNSP is not certain that the AER is able to classify a service provided by means of a non-network option as a distribution service, then it could be reluctant to explore the merits of such a technology if it were not guaranteed to recover regulated revenue for it.

An example of such an investment option which potentially does not meet the distribution service definition is a stand-alone power systems (SPS). The near-term opportunity from the deployment of SPS as an alternative to network renewal could provide significant benefit to customers in the NEM. A regulatory sandbox could provide an ideal regulatory environment for trialling the benefits to customers of SPS deployment.

Concluding remarks

As an innovator, Evoenergy is excited by the opportunity to be involved in this initiative by supporting the design and development of a regulatory sandbox that is flexible and open to innovation. One aspect

which could provide flexibility is opening the sandbox to submissions as opportunities arise, as opposed to OFGEM's approach of having structured submission rounds. Given that the purpose of the sandbox is to enable innovation through an express path, special care should be taken when designing the sandbox so that it is least onerous in its requirements whilst maintaining the necessary safe-guards.

In our pursuit to provide maximum value to our customers and our business, Evoenergy is constantly looking for ways and partnerships which can innovate and improve our services. Partnerships make sense from the perspective of Evoenergy having the sector knowledge and regulatory expertise that is complemented with developers' innovative technological solutions. Trialling these solutions in many cases requires flexibility around the application of regulations. We therefore welcome the discussion on regulatory sandbox arrangements. We have several business cases which we believe would benefit from such arrangements and which are ready to be tested under a regulatory sandbox. We look forward to the opportunity of doing so.