

Australian Energy Market Commission

DRAFT REPORT

**REGULATORY SANDBOX
ARRANGEMENTS TO SUPPORT
PROOF-OF-CONCEPT TRIALS**

11 JULY 2019

REVIEW

INQUIRIES

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ABOUT THE AEMC

The AEMC reports to the Council of Australian Governments (COAG) through the COAG Energy Council. We have two functions. We make and amend the national electricity, gas and energy retail rules and conduct independent reviews for the COAG Energy Council.

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SUMMARY

1 The Australian Energy Market Commission's (AEMC or Commission) draft recommendation to the Council of Australian Governments (COAG) Energy Council is that current arrangements for facilitating proof-of-concept trials can be improved and that trials can be better facilitated and coordinated through the introduction of regulatory sandbox arrangements in the national energy markets.

2 A number of existing and new tools should be included in the regulatory sandbox toolkit to assist innovative proof-of-concept trials to be carried-out. Three new tools are proposed that trial proponents should consider sequentially:

- an innovation inquiry service, to provide guidance and feedback that can help facilitate trials that are feasible under current laws and regulation
- a new Australian Energy Regulator (AER) regulatory waiver power, which can temporarily exempt trials from regulatory barriers arising out of the existing rules
- a new AEMC trial rule change process that can temporarily change existing rules or temporarily introduce a new rule of limited application to allow a trial to go ahead.

3 The second and third tools would require changes to the National Electricity Law (NEL), National Energy Retail Law (NERL) and National Gas Law (NGL).

4 This draft report has been published to facilitate stakeholder consultation on the draft recommendations set out below, ahead of the AEMC providing more detailed advice on law and rule changes to implement these recommendations in the final report later in 2019.

Request from COAG Energy Council Senior Committee of Officials (SCO)

5 The Commission was requested by SCO to provide interim advice by February 2019 as part of the 2019 *Electricity network economic regulatory framework review* on how to best facilitate co-ordination of proof-of-concept trials and the need for formal regulatory sandbox arrangements to support innovative projects offering benefits to customers while managing any risks. The Commission was requested to consider issues beyond economic regulation and the need for regulatory sandbox arrangements in other parts of the regulatory framework.

Interim advice

6 The Commission published its interim advice on 7 March 2019 proposing a regulatory sandbox initiative that could make use of a variety of existing and new tools that could be applied according to their suitability to a proposed trial.

7 The Commission noted that further stakeholder consultation is warranted on the design of the regulatory sandbox arrangements, which is facilitated by this draft report and that it would take further steps to develop a new process for coordinated guidance and feedback for trial proponents in collaboration with the Australian Energy Regulator (AER), Australian Energy Market Operator (AEMO), Energy Consumers Australia (ECA) and Australian Renewable Energy Agency (ARENA).

Earlier consultation

- 8 The Commission published a consultation paper on 20 December 2018 inviting written submissions by 31 January 2019. Feedback from stakeholders suggested there were barriers to conducting proof-of-concept trials under the current regulatory framework, with stakeholders raising concerns including a lack of flexibility in the regulatory framework, the absence of a defined and well understood regulatory process for conducting trials and the complexity of the framework. Stakeholders highlighted that regulatory sandbox arrangements which provided further regulatory flexibility, a defined regulatory process for conducting trials and further guidance on navigating the regulatory framework for innovators would serve to better facilitate proof-of-concept trials and promote innovation.
- 9 The Commission has engaged further with the AER, AEMO, ECA and ARENA in preparing this draft report. Stakeholder input on the design of the sandbox arrangements provided in consultation paper submissions was also considered.

Draft recommendations

- 10 The emergence of innovative technologies and business models in the national energy markets can bring significant benefits to consumers.
- 11 The Commission considers that a regulatory sandbox initiative would provide for a regulatory framework that is better equipped to respond to the rapid change in the energy sector and deliver customer benefits through innovation. To access regulatory relief, proof-of-concept trials would need to be time-limited and meet appropriate eligibility criteria, and appropriate consumer safeguards must remain in place.
- 12 The objective of these arrangements should be to encourage innovation which has the potential to contribute to the long-term interests of consumers, rather than simply to facilitate an increased number of trials. Innovations that are in consumers' interests can also be encouraged by establishing a clearer process for proponents of proof-of-concept trials to approach energy market regulatory bodies for feedback and guidance on regulatory issues and regulatory options to avoid unnecessary delays and costs for eligible trials. This can help reduce the barriers to the introduction of more efficient approaches to the delivery of energy services.
- 13 The Commission proposes a regulatory sandbox initiative that makes use of a variety of existing and new tools that could be applied according to their suitability to a proposed trial. The regulatory tools in the sandbox initiative include the following:
- **Coordinated feedback and guidance on regulatory issues.** Market bodies have developed a new, coordinated approach to providing feedback and guidance to proponents of innovative trials, technologies and business models. This would be led by the AER as a clear first point of contact for proof-of-concept trials who is able to provide "fast, frank feedback" on a range of issues, whilst referring to the other market bodies where appropriate. This would build on the market bodies established processes to answer regulatory inquiries.
 - **A new AER regulatory waiver power** that can provide time-limited regulatory relief from the rules to eligible trials. This can be used if an eligible trial required an exemption from a specific rule (or rules). As proposed by the AER, this would involve a broad power

for the AER to grant specific exemptions and waivers to facilitate the conduct of proof-of-concept trials, subject to a “sandbox guideline” the AER develops in consultation with the market bodies and relevant stakeholders. The exercise of this power by the AER would be subject to eligibility criteria being met.

- **A new AEMC expedited rule change process for proof-of-concept for trials.** This could be used if an eligible trial required new rules or the alteration of existing rules for a limited time to be conducted. The proposed trial rule change process is similar to the current expedited rule making process in the NEL, NERL and NGL.
- **Existing regulatory tools** such as the AER’s ring-fencing waivers and retailer exemptions. The first point of contact would refer trial proponents to these processes where appropriate.

14 It is possible that some proof-of-concept trials may require more than one of the regulatory sandbox tools to proceed. For other proof-of-concept trials, existing arrangements may be sufficient, and they may not need any of the sandbox tools to proceed. Trials that can be conducted under current regulatory arrangements will still be able to proceed without using the sandbox tools.

15 The Commission's more detailed draft recommendations are set out below.

Next steps

16 The Commission is seeking stakeholder feedback on the draft recommendations and the questions throughout this draft report. Written submissions from stakeholders commenting on the draft recommendations and questions raised in this draft report are requested by **8 August 2019**. How to make a submission is set out in Chapter 6.

17 The AEMC will publish a final report later in 2019 to provide more detailed advice on law and rule changes to give effect to the new AER powers and AEMC rule change process, under the 2019 *Electricity network economic regulatory framework review*.

DRAFT RECOMMENDATION 1: THE REGULATORY SANDBOX TOOLKIT

The Commission's draft recommendation is that a variety of existing and new tools should be included in the regulatory sandbox toolkit to assist innovative proof-of-concept trials to be carried-out. Some trials may be able to proceed without using any of the tools contained in the sandbox toolkit. The toolkit contains three distinct levels that trial components should consider sequentially:

1. the inquiry service provides guidance and feedback, which can help facilitate trials that are feasible under current laws and regulation
2. the regulatory waiver process can temporarily exempt trials from regulatory barriers arising out of existing rules only
3. the trial rule change process can temporarily change existing rules or temporarily introduce a new rule for a person to permit a trial to be commissioned.

DRAFT RECOMMENDATION 2: REGULATORY GUIDANCE

Introduce a new innovation inquiry service to provide regulatory guidance to proof-of-concept trial proponents and innovators, that:

- creates a clear process for guidance and feedback for innovative projects
- helps communicate clearly to innovators that this guidance and feedback is available
- is led by the AER as the first point of contact
- builds on the AER's established processes to answer regulatory inquiries
- provides 'fast, frank feedback'
- does not provide legal advice
- is open to all and does not charge a fee for access
- can provide a first step towards access to the other regulatory sandbox tools
- allows referrals to be coordinated across the market bodies
- encourages the identification of potential regulatory barriers by market bodies through the AER publishing high-level information on the usage of the service.

DRAFT RECOMMENDATION 3: REGULATORY WAIVERS

- Establish a broad power for the AER to grant regulatory waivers to proof-of-concept trials, meeting the regulatory waiver test, and entry and eligibility requirements set out in the sandbox guideline.
- Sandbox trials will have to meet a high level test, the regulatory waiver test, set out in the National Electricity Law (NEL), National Energy Retail Law (NERL) and National Gas Law (NGL).
- The regulatory waiver test will require the AER to assess if a trial is consistent with the national electricity objective (NEO), national energy retail objective (NERO) or national gas objective (NGO) and if it is genuinely innovative with the potential to lead to better services and outcomes for customers.
- The AER will develop a sandbox guideline in consultation with stakeholders.
- The requirement for the AER to develop a sandbox guideline will be set out in the National Electricity Rules (NER), National Energy Retail Rules (NERR) and National Gas Rules (NGR) with the AER retaining some discretion to define the entry and eligibility criteria in consultation with stakeholders.
- Trials will have to meet the entry criteria in the sandbox guideline required by the NER, NERR and NGR.
- Trials will have to meet the eligibility criteria in the sandbox guideline required by the NER, NERR and NGR.
- Trials will be limited in time and scope.

- Regulatory waivers can only be granted for regulatory barriers arising out of existing rules.
- The AER will have a time limit to issue a decision on regulatory waiver applications specified in the sandbox guideline.
- The AER can impose conditions on a waiver and revoke the waiver if conditions are not met.
- Trial proponents can be required under the sandbox guideline to report to the AER on their performance against the conditions of their waiver.
- The AER will have the ability to extend waivers to allow proponents of successful trials to become fully compliant with the rules.

DRAFT RECOMMENDATION 4: NEW TRIAL RULE MAKING PROCESS

Introduce a new trial rule making process, of less than eight weeks duration with the following features:

- a single round of consultation
- the current rule making tests (NEO, NGO and NERO) apply to trial rule changes
- any person (apart from the AEMC) may lodge a rule change proposal
- restricted to time limited trials, where the trial has a reasonable prospect of delivering a material benefit to consumers and where consideration of a permanent rule change would otherwise be hampered through inadequate information or experience
- a precondition requiring the rule change proponent to demonstrate that a rule change is necessary
- the AEMC is able to require detailed information about the proposed trial itself
- the AEMC may impose conditions on the use of the trial rule change
- a mechanism to terminate the rule change process if it becomes apparent that the final form of the rule is unlikely to lead to a trial
- a requirement for explicit informed consent from materially impacted consumers participating directly in a trial.

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1 INTRODUCTION

Regulatory sandboxes provide a framework within which participants can trial initiatives under relaxed regulatory requirements on a time-limited basis and with appropriate safeguards in place.

This chapter is structured as follows:

- Section 1.1 provides the background to this review
- Section 1.2 explains the regulatory sandbox approach, including examples
- Section 1.3 sets out the current arrangements in the national energy markets
- Section 1.4 discusses recent trials
- Section 1.5 summarises stakeholder feedback to the Commission's consultation paper.

1.1 Background

The emergence of innovative technologies and business models in the national energy markets can bring significant benefits to consumers. This was highlighted in the *Independent Review into the Future Security of the National Electricity Market (Finkel review)*, which noted that innovative technologies can help reduce the costs of providing secure and reliable electricity supply and also contribute to reducing emissions.¹ As such, it is important that the regulatory framework and processes support potentially beneficial emerging technologies and business models.

The Finkel review recommended updating the proof-of-concept testing framework, to facilitate innovation in the NEM. The review noted that new concepts that are inconsistent with the National Electricity Rules (NER) need to be proven to the point where a rule change can be made prior to being used in the NEM. Recommendation 2.8 was that the Commission review and update the regulatory framework to facilitate proof-of-concept testing of innovative approaches and technologies. The review also suggested investigation of mechanisms adopted by other jurisdictions, such as those adopted by the Office of Gas and Electricity Markets (OFGEM) in the United Kingdom (UK). Recommendation 2.8 was accepted by Energy Ministers.

In February 2018, the Energy Market Transformation Project Team (EMTPT)² agreed that a working group made up of officials from the Commonwealth and other interested jurisdictions would undertake further research on the case for introducing a regulatory sandbox.

In the 2018 *Electricity network economic regulatory framework review*, the Commission outlined the regulatory sandbox arrangement that has been adopted by OFGEM in the UK. The review highlighted that where innovation may benefit consumers, there may be merit in applying a regulatory sandbox arrangement so that any changes to the regulatory framework can be fast tracked. However, the Commission noted that trials and other forms of regulatory

1 Dr Alan Finkel et al., *Independent Review into the Future Security of the National Electricity Market*, June 2017, p.66.

2 The EMTPT was established by the COAG Energy Council in December 2015 to consider issues related to the ongoing energy sector transition driven by changing technologies, increasing consumer engagement, new energy products and services. It is made of officials from each jurisdiction.

innovation can currently be facilitated under the regulatory framework through the AER exercising its enforcement discretion and the use of "no action letters". The Commission noted it was interested in stakeholder views on the need for more formal arrangements for regulatory sandboxes and would consider this further in the 2019 *Electricity network economic regulatory framework review*.

On 24 October 2018, the Commission received a request from the Senior Committee of Officials (SCO) of the COAG Energy Council to further investigate a formal approach for facilitating proof-of-concept testing in the NEM. The request was informed by research carried out by the working group of Commonwealth and state officials and reported in the EMTPT paper attached to the SCO request.

1.1.1 Request from the Senior Committee of Officials

The Senior Committee of Officials (SCO) believes that there is merit in looking at a more formal and systematic approach to supporting experimentation within the regulatory framework where there are potential benefits to energy consumers. In its request to the Commission, SCO noted that it would be useful to be able to perform in-market trials of wholesale demand response to inform the current rule change process. SCO considers that a regulatory sandbox could also help to test a range of technologies and business models to inform the Distributed Energy Integration Program (DEIP). The DEIP is a collaboration of government agencies, market authorities, industry and consumers associations aimed at maximising the value of customers' distributed energy resources for all energy users.³

1.1.2 Energy Market Transformation Project Team paper

A research paper from the EMTPT on regulatory sandbox arrangements was attached to the request from SCO (EMTPT paper). A working group made up of Commonwealth, Victorian, Queensland and New South Wales representatives undertook research and consultation on the case for introducing a regulatory sandbox and options for next steps to progress implementation of the Finkel review recommendation 2.8. The consultation involved a range of stakeholders including the energy market bodies, ARENA, the Australian Securities and Investment Commission (ASIC), network businesses, new entrants, and consumer representatives. Consultation with market bodies was undertaken on an unofficial basis.

The EMTPT paper provides an introduction of regulatory sandboxes, the current arrangements for proof-of-concept testing, an assessment of the need for a sandbox arrangement and a suggested approach for adoption of a regulatory sandbox arrangement. The paper notes that the Commission along with AEMO, AER and ARENA have been working together to support proof-of-concept trials within the existing regulatory framework and that the approach appears to be adequate to deal with the current demand. However, EMTPT considers that there is merit in a more structured process to facilitate experimentation within the regulatory settings as a tool that could support major future reforms. According to EMTPT, it would also enable energy market bodies to identify key priorities, and develop trials which address particular problems or help define the design of reforms. EMTPT suggests that

³ ARENA 2018, viewed 21 June 2019, <https://arena.gov.au/where-we-invest/distributed-energy-integration-program/>.

further work be undertaken on designing a regulatory sandbox initiative, coordinated across all market bodies, as a pilot to support future reforms with a specific and limited project scope.

The stakeholders responding to the EMTPT consultation took a broad view of what could be tested in a NEM sandbox to include both new technologies and business models, and also new regulatory approaches or market design. The stakeholders also saw potential application of a regulatory sandbox across a number of areas including network regulation, wholesale markets and retail. ARENA's response to EMTPT consultation considered that a range of tools could exist within the concept of a regulatory sandbox, including regulatory exemptions and/or a wide range of complementary activities such as technical advice, industry capacity building or funding.

1.2 The regulatory sandbox approach

1.2.1 What is a regulatory sandbox?

A regulatory sandbox was first adopted by the Financial Conduct Authority (FCA) in the United Kingdom in June 2016.⁴ The approach has since been adopted by regulators across different industries and jurisdictions seeking to facilitate innovation. Broadly, a formal regulatory sandbox is a framework within which participants can trial innovative business models, products and services in the market under relaxed regulatory requirements on a time-limited basis and with appropriate safeguards in place. There are a variety of other regulatory tools that could be used to facilitate proof-of-concept trials, such as provision of information, exemptions and waivers, a number of which are already in place in the national energy markets.

1.2.2 Potential benefits of regulatory sandbox arrangements

Regulatory sandbox arrangements are expected to support innovative projects in several ways including through:

- improved access to finance for projects through increased regulatory certainty⁵
- enabling testing and fine-tuning in a controlled testing environment⁶
- allowing regulators to work with innovators to build appropriate consumer protection safeguards into new products and services⁷
- helping regulators identify the need for reform to the existing regulatory framework.⁸

1.2.3 Implementation by OFGEM

OFGEM offers a one stop shop called "innovation link" for businesses seeking to introduce innovative or significantly different propositions to the UK energy sector. Innovation link offers two main services that includes "fast, frank feedback" and a regulatory sandbox.

4 Ernst & Young, *As FinTech evolves, can financial services innovation be compliant?*, 2017, p.13.

5 Financial Control Authority, *Regulatory sandbox lessons learned report*, October 2017, pp.5-6.

6 Ibid.

7 Ibid.

8 OFGEM, *Insights from running the regulatory sandbox*, October 2018, p.1.

The fast, frank feedback service is available throughout the year to businesses meeting the eligibility criteria. Under the criteria the proposition:

- must be ground-breaking or significantly different
- must have a good prospect for consumer benefit
- must demonstrate a genuine need for support
- may be required to show they have undertaken a reasonable amount of background research and thinking.

The service can provide an "informal steer" to innovating businesses on the regulatory implications of their propositions, however it is not a binding response. The advice provided by the innovation link team does not represent an official view from OFGEM, and the feedback is subject to a legal disclaimer.⁹ It can help innovating businesses to navigate the regulatory challenges being faced, identify the regulatory barriers affecting the proposition and provide input to long term policy development. It can be accessed by innovators through an application to OFGEM.

OFGEM grants regulatory sandboxes to eligible innovative projects under a process carried out periodically through a round for applications. OFGEM initiates the process by requesting expressions of interest from energy innovators aiming to trial a proposition that may benefit from a regulatory sandbox. OFGEM engages with all project proponents who apply to discuss their proposition in the context of the sandbox eligibility criteria as well as to understand their product, service or business model. For an innovative project to be able to receive regulatory sandbox support, the proposal needs to meet the following criteria:

- the proposal is genuinely innovative
- the innovation will deliver consumer benefits and consumers will be protected during the trial
- a regulatory barrier inhibits innovation
- the proposal can be trialled.

1.2.4 **Implementation by ASIC**

ASIC has launched an innovation hub to foster innovation in the finance sector. Services of the hub can be accessed by "startups and scaleups" meeting the relevant criteria.¹⁰ Similar to OFGEM arrangements, the ASIC innovation hub can provide assistance to eligible innovative projects by providing them advice and regulatory sandboxes.

1.3 **Current arrangements in the national energy markets**

This section sets out the current regulatory tools, arrangements and processes administered by different market bodies in the national energy markets that provide flexibility within the regulatory framework.

⁹ OFGEM 2018, viewed 4 December 2018, <https://www.ofgem.gov.uk/about-us/how-we-engage/innovation-link>.

¹⁰ ASIC Innovation hub website, viewed 21 June 2019, <https://asic.gov.au/for-business/innovation-hub/>.

1.3.1

Market bodies

AER

Under the current regulatory framework, trials and other forms of innovation can be facilitated by the AER exercising its enforcement discretion. The AER has a range of compliance tools and discretion in deciding whether to take enforcement action. It undertakes a risk assessment to target and prioritise its monitoring and enforcement activities based on several factors including the potential impacts and probability of breaches.¹¹ The AER is able to issue a no action letter in a wide range of circumstances, however they generally avoid using them except in special circumstances where they are appropriate.

The AER also has the ability to provide a range of exemptions and waivers, including under its network service provider registration exemption guideline¹², retail exempt selling guideline¹³ and ring-fencing guideline¹⁴, and is able to provide individual exemptions if existing guidelines do not cover the situation.

AEMO

As the independent market and system operator AEMO is involved in trials in a range of capacities. AEMO is currently involved in several trials of new energy technologies and systems.

Proof-of-concept trials can play an important role in understanding and responding to the challenges and opportunities that new technologies and solutions present. In response to these changes, AEMO seeks to run trials under conditions that are as close to the real-world, "in-market" scenario as possible.

AEMO engages with scientific and funding bodies such as the Commonwealth Scientific and Industrial Research Organisation (CSIRO), ARENA and the Bureau of Meteorology (BOM) to develop and trial new technologies. AEMO has entered into formal relationships (e.g. memoranda of understanding (MOU)) with these bodies to support collaboration, facilitate prioritisation and value maximisation of trials. In addition, AEMO has a formal advisory role with other research and development bodies.

AEMO is also regularly approached by registered or prospective market participants seeking to progress new concepts and innovations.

AEMC

While the AEMC does not have a formal role in facilitating trials, it can consider innovative rule changes that facilitate new business models where they are in the long term interests of consumers. For example, the AEMC completed the 5-minute settlement rule change in November 2017 which aligns financial incentives with physical operation and will more

11 AER, *Compliance and Enforcement: Statement of Approach*, April 2014.

12 AER, *Electricity network service provider registration exemption guideline*, version 6, March 2018.

13 AER, *AER (retail) exempt selling guideline*, version 5, March 2018.

14 AER, *Ring-fencing guideline - electricity distribution*, version 2, October 2017.

accurately reward those who can deliver supply or demand side responses when they are needed by the power system. The AEMC is currently considering the wholesale demand response rule change. AEMO and ARENA are assisting this rule change process through trials or studies that leverage existing ARENA projects or the knowledge of ARENA project participants.¹⁵

The AEMC also has an expedited rule change process, under which non-controversial or urgent rule changes can be made within eight weeks. It could allow for prompt changes to the rules to bring new products and services to the market under certain circumstances. The rule change process can therefore be an avenue to facilitate innovative ideas and new business models.

Information for new entrants

The market bodies publish a range of information that can help new entrants understand the energy markets and rules such as the AER's annual *State of the energy market* reports, AEMO's *Electricity statement of opportunities* and the AEMC's guides to the rule change process and applying the energy objectives, as well as information sheets and infographics that accompany reviews and rule change determinations. AER and AEMO engage directly with new retail and generation market entrants as they go through the relevant authorisation and registration processes. The market bodies each have general information lines that can be used by members of the public to ask questions about the regulatory framework.

1.3.2

Non-market bodies

ARENA

ARENA was established in 2011 with the objective of improving the competitiveness of renewable energy technologies and increasing the supply of renewable energy in Australia.¹⁶ ARENA provides funding to researchers, developers and businesses that have demonstrated the feasibility and potential commercialisation of their project. ARENA also builds and supports networks, and shares the knowledge, insights and data from funded projects.

ARENA has established the A-lab initiative¹⁷ to create cross-sector partnerships and world-first projects to transform Australia towards a clean energy future. AEMC, AEMO, Energy Consumers Australia and AER have participated in this process to help participants develop their ideas into new projects, trials and other initiatives.

ARENA is collaborating with the market bodies, consumer representatives and industry on the Distributed Energy Integration Program (DEIP) to better coordinate DER integration activities.¹⁸ DEIP's mission is to collaborate to maximise the value of customers' distributed energy resources to all energy users.

Energy Consumers Australia

¹⁵ AEMC, *Wholesale demand response mechanisms*, Consultation paper, 15 November 2018.

¹⁶ Australian Renewable Energy Agency Act 2011, s.3.

¹⁷ ARENA 2018, viewed 10 December 2018, <https://arena.gov.au/a-lab-energy-system-innovation/>.

¹⁸ ARENA 2018, viewed 6 December 2018, <https://arena.gov.au/where-we-invest/distributed-energy-integration-program/>.

Energy Consumers Australia (ECA) is an independent organisation set up by the COAG Energy Council in 2015 and seeks to promote the long term interest of consumers with respect to price, quality, safety, reliability and security of supply of energy services. ECA is a member of the DEIP steering group and has been involved in the early discussions regarding regulatory sandboxes.

1.4 Recent trials

A range of propositions have gone under trial across the energy sector. They vary in terms of size of the trial, the duration, proponents of trials, the matter being tested and potential impacts of the trial. Some of these trials include:

- **Hornsedale wind farm Frequency control ancillary services trial:** An in-market technical demonstration of a wind or solar farm providing frequency control ancillary services (FCAS) in the NEM.¹⁹
- **CONSORT Bruny Island Battery Trial:** An exploration of how the residential batteries can be used by households to manage their energy while simultaneously assisting network operators with ongoing network issues by providing improved network visibility, improved reliability and up-time, and managing voltage levels and load flows across the network.²⁰
- **New Reg process trial by Ausnet:** A project to aimed at improving engagement on network revenue proposals, and to identify opportunities for regulatory innovation.²¹
- **AGL Virtual Power Plant (VPP):** Creating a prototype Virtual Power Plant (VPP) by installing and connecting a large number of solar battery storage systems across residential and business premises in Adelaide, South Australia.²²
- **AEMO-ARENA joint Demand Response Trial:** ARENA and AEMO have partnered to trial demand response services using the Reliability and Emergency Reserve Trader (RERT) arrangements.²³
- **Virtual power plant demonstrations:** The AEMC, AEMO, AER and members of the Distributed Energy Integration Program (DEIP) are collaborating to establish VPP demonstrations.²⁴

1.5 Stakeholder feedback

The Commission published a consultation paper on "Regulatory arrangements to support proof of concept trials" in December 2018.²⁵ The consultation paper explored potential

19 AEMO, *Hornsedale Wind Farm 2FCAS trial: Knowledge Sharing Paper*, July 2018, pp.1-4.

20 Australian National University, *Reposit Power*, The University of Sydney, University of Tasmania and TasNetworks.

21 AER ECA ENA, *New Reg - towards consumer centric energy network regulation*, March 2018.

22 ARENA, viewed 21 June 2019, <https://arena.gov.au/projects/agl-virtual-power-plant/>.

23 ARENA/AEMO, *Joint response to AEMC Directions Paper Section 5: Wholesale Demand Response*, May 2018, p.5.

24 AEMO 2018, viewed 21 June 2019, <http://aemo.com.au/Electricity/National-Electricity-Market-NEM/DER-program/Virtual-Power-Plant-Demonstrations>.

25 AEMC, *Consultation paper, Regulatory sandbox arrangements to support proof-of-concept trials*, 20 December 2018.

regulatory barriers to proof-of-concept trials and the need for formal regulatory sandbox arrangements.

Feedback from stakeholders suggested there were barriers to conducting proof-of-concept trials under the current regulatory framework, with stakeholders raising concerns including a lack of flexibility in the regulatory framework, the absence of a defined and well understood regulatory process for conducting trials and the complexity of the framework. Stakeholders highlighted that regulatory sandbox arrangements which provided further regulatory flexibility, a defined regulatory process for conducting trials and further guidance on navigating the regulatory framework for innovators would serve to better facilitate proof-of-concept trials and promote innovation.

The Commission published an interim advice, which included a detailed analysis of responses to the consultation paper, in March 2019.²⁶

1.6 Structure of this draft report

Chapter 2 discusses the overall toolkit, including interrelationships between toolkit elements.

The remainder of the report looks separately at the three new components being considered for inclusion as part of a sandbox toolkit for energy regulation as follows:

- Chapter 3 - regulatory guidance
- Chapter 4 - regulatory waivers
- Chapter 5 - trial rule changes.
- Chapter 6 sets out how to make a submission.

²⁶ AEMC, *Interim Advice, Regulatory sandbox arrangements to support proof-of-concept trials*, 7 March 2019.

2 THE REGULATORY SANDBOX TOOLKIT

DRAFT RECOMMENDATION 1: THE REGULATORY SANDBOX TOOLKIT

The Commission's draft recommendation is that a variety of existing and new tools should be included in the regulatory sandbox toolkit to assist innovative proof-of-concept trials to be carried-out. Some trials may be able to proceed without using any of the tools contained in the sandbox toolkit. The toolkit contains three distinct levels that trial components should consider sequentially:

1. the inquiry service provides guidance and feedback, which can help facilitate trials that are feasible under current laws and regulation
2. the regulatory waiver process can temporarily exempt trials from regulatory barriers arising out of existing rules only
3. the trial rule change process can temporarily change existing rules or temporarily introduce a new rule for a person to permit a trial to be commissioned.

This chapter explains the Commission's draft recommendations on what the regulatory toolkit should contain and how it will work:

- Section 2.1 provides background and a summary of the Commission's interim advice
- Section 2.2 explains the toolkit
- Section 2.3 illustrates how the sandbox toolkit will encourage innovation.

2.1 Background and interim advice

The Commission's interim advice²⁷ was that proof-of-concept trials can be better facilitated and coordinated through a regulatory sandbox initiative. This initiative should make use of a variety of existing and new regulatory tools that are appropriate to the proposed trial. Formal regulatory sandbox arrangements that allow for regulatory relief would be one of these tools. In its interim advice to SCO, the Commission noted that trials have the potential to contribute to consumers' interests where they encourage innovation to meet consumers' needs whilst maintaining appropriate consumer safeguards. Whilst some trials have been conducted under current regulatory arrangements, a regulatory sandbox initiative can better facilitate appropriate trials by creating a clearer process and avoiding unnecessary delays and costs. It can also help market bodies better coordinate prioritisation of trials, provision of input to their design and dissemination of any lessons learnt.

The Commission also proposed that a number of new tools should be developed for the regulatory sandbox initiative, which could be applied depending on the nature of the proposed trial.

²⁷ AEMC, *Regulatory sandbox arrangements to support proof-of-concept trials*, interim advice, March 2019.

In forming its draft recommendation, the Commission took into account stakeholder submissions it received on the consultation paper. The feedback from the majority of stakeholders was that the provision of advice was an important element of facilitating innovation and proof-of-concept trials.²⁸ Stakeholders generally considered that navigating the regulatory arrangements and the complexity of the regulatory framework can be challenging for newer and smaller participants, and that providing further guidance and advice on regulations would help address these challenges. For example, Simply Energy considered that the current regulatory framework lacked flexibility and was too complex to effectively promote innovation.²⁹ NEV Power stated that the NEM is a complex set of rules, acronyms and regulatory bodies which make it hard for organisations like theirs to be innovative and advance on their goals.³⁰ Ausgrid noted that energy market regulation is a complex mix of national and state laws and regulations, which would undoubtedly be daunting for new entrepreneurs to navigate.³¹

PIAC considered that quick and accessible guidance from a market body would be useful for new entrants to the energy market, including those with a business model that involves an innovative energy-only service, or where the provision of those energy services is a secondary consequence of a non-energy related service being offered.³²

AEMO anticipates that if a regulatory sandbox involving regulatory relief was pursued, third parties would require significant support in scoping and developing trial proposals.³³

2.2 What is the toolkit?

As outlined above, the sandbox initiative is best thought of as a toolkit of various regulatory options that can be applied to the specific circumstances of trials.

The Commission's draft recommendation is that the AER would take on the role of a first point of contact for proponents of trials interested in accessing the sandbox toolkit. An explanation of the sandbox toolkit be made available via all the market bodies' websites.

The proposed tools in the sandbox initiative include:

1. a new process to access feedback and guidance on regulatory issues
2. a new AER regulatory waiver or exemptions power
3. a new AEMC expedited rule change process for proof-of-concept trials.

It is expected that most innovators would consider going through the three steps sequentially. Proponents would need to demonstrate they have considered the earlier steps when applying for later steps, however they would not require written approval to enter the later steps. For example, they would not need to complete a full regulatory waiver application process before applying for a trial rule change.

28 Submissions to the consultation paper: Ausgrid, p. 6, TasNetworks, p. 5, Essential Energy, p. 6, Energy Startup p. 4.

29 Simply energy submission to the consultation paper, p. 2.

30 NEV power submission to the consultation paper, p.2.

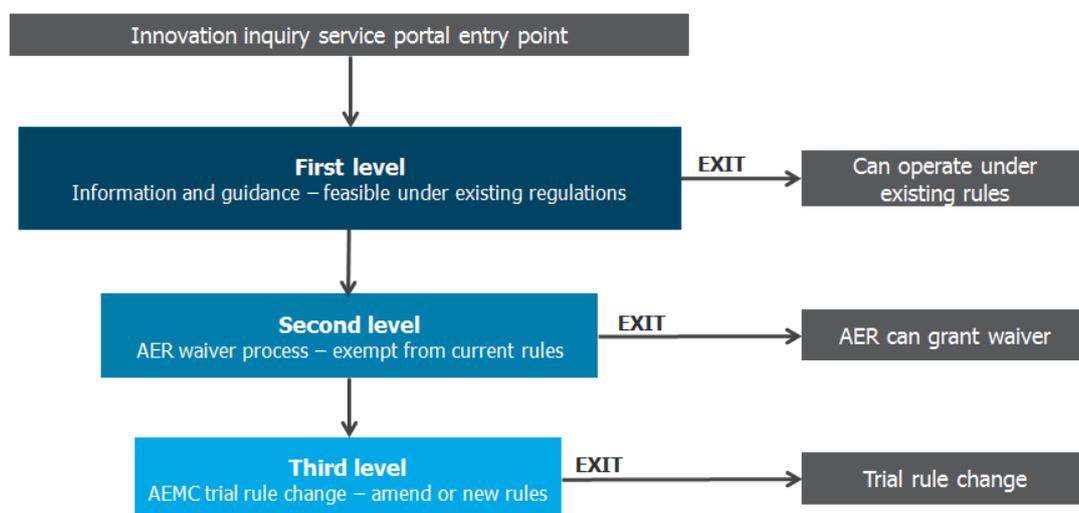
31 Ausgrid submission to the consultation paper, p. 2.

32 PIAC submission to the consultation paper, p. 2.

33 AEMO submission to the consultation paper, p. 6.

The Commission's draft recommendation is that the sandbox toolkit should be designed so that trial proponents have a clear idea what to expect at each stage. The sandbox should be transparent and predictable. Figure 2.1 shows how the sandbox tools are linked.

Figure 2.1: Sandbox tool kit



Source: AEMC

The Commission considers that the first level of the sandbox kit will be most utilised by trial proponents (Chapter 3). This is partly based on OFGEM's finding that innovators commonly needed advice, not a sandbox.³⁴ If specific regulatory barriers have been identified that arise out of the current rules, the trial proponent can apply to the AER for a regulatory waiver (Chapter 4), though we expect far fewer applications than requests for guidance and feedback. If it has been identified that rules have to be amended or new rules have to be introduced, and it would take too long and be too costly to apply for a market wide rule change, the trial proponent has the opportunity to apply to the AEMC for a trial rule change. It is expected that only a few trials will use this tool, and proponents would need to do substantial preparations for their application, but the Commission believes it is important to provide this opportunity so that innovative trials which otherwise would not be able to go ahead, can get a temporary trial rule to proceed with their trial.

Table 2.1 illustrates a trial proponent's journey through the sandbox toolkit.

It is possible that some proof-of-concept trials may require more than one of the regulatory sandbox tools to proceed. For other proof-of-concept trials, existing arrangements may be sufficient, and they may not need any of the sandbox tools to proceed. Trials that can be conducted under current regulatory arrangements will still be able to proceed without using the sandbox tools.

³⁴ OFGEM, Insights from running the regulatory sandbox, October 2018, pp. 1-4.

Table 2.1: Sandbox trial proponent's journey

APPLICANT	MARKET BODIES
1. Contacts the innovation inquiry line and provides some details of their proposal and issues.	The AER provides guidance and feedback in coordination with AEMO and AEMC where needed
2. If the proponent has identified a specific regulatory barrier they can apply for a regulatory waiver. They should contact the AER to discuss this process before applying. They will need to provide the information required in the AER's sandbox guideline, including demonstrating that they cannot proceed under the existing rules.	The AER assess the application, consults with the AEMC, AEMO and other stakeholders and decides to grant or refuse
3. If the proponent has determined their trial can't proceed under the existing rules, nor under a waiver they can apply for trial rule change. They should contact the AEMC to discuss this process before applying. They will need to provide a detailed written application, including demonstrating that they have considered steps 1 and 2 and consulted with AER and AEMO.	The AEMC assesses the application, consults with the AER, AEMO and other stakeholders and decides to grant or refuse.

Source: AEMC

2.3 How the toolkit will encourage innovation

The Commission considers that having a sandbox toolkit provides a clear and transparent process for proof-of-concept trial proponents to navigate the regulatory framework and assist them in getting their trials commissioned.

Innovation in the energy markets, has the potential to advance the national energy objectives (NEO, NERO and NGO) and lead to better services and prices for consumers. Submissions have indicated that stakeholders did not go ahead with innovative trials because of the regulatory barriers they faced. For example, ARENA highlighted that it had worked with trials that have not proceeded due to regulatory barriers and where no-action letters were deemed insufficient to address legal risks such as third party litigation.³⁵

On a similar note LO3 Energy considered that it's Local Energy Market (LEM) platform that involves peer-to-peer trading and aggregation of sources to provide demand response, energy and ancillary services could not be fully tested under the current rules. It considered

³⁵ ARENA submission to the consultation paper, p. 4.

that limitations were imposed by restrictions on multiples trading relationships (MTR) at a connection point and the wholesale market settlement processes.³⁶

The Australian National University (ANU) considered the possible areas of innovation that could benefit from regulatory sandbox arrangement to include new customer representation models, novel tariffs and tiered regulations. According to the ANU, the sandbox arrangements could also provide for investigating tiered approaches to regulations such as those involving different regulatory environments for electricity retailers of different sizes.³⁷

Drawing on its experience, TasNetworks highlighted that its proposed embedded network and microgrid project at Nubeena has not proceeded due to regulatory barriers.³⁸

In designing the sandbox toolkit, the Commission considered that having a transparent framework for trial proponents will encourage innovation by assisting innovators:

- to navigate the rules and regulations of the national energy markets
- to find solutions if they face regulatory barriers.

Consistent with overseas experience, the Commission's sandbox toolkit aims to support innovation in markets in several ways including through:

- improved access to finance for projects through increased regulatory certainty³⁹
- enabling testing and fine-tuning in a controlled testing environment⁴⁰
- allowing regulators to work with innovators to build appropriate consumer protection safeguards into new products and services⁴¹
- helping regulators identify the need for reform to the existing regulatory framework.⁴²

Further, proof-of-concept trials, facilitated by the regulatory sandbox toolkit, could be used to inform consideration of regulatory changes before adoption of reforms across the market.

36 LO3 Energy submission to the consultation paper, p. 2.

37 ANU submission to the consultation paper, p. 3.

38 TasNetworks submission to the consultation paper, p. 3.

39 Financial Control Authority, *Regulatory sandbox lessons learned report, October 2017*, pp. 5-6.

40 Financial Control Authority, *Regulatory sandbox lessons learned report, October 2017*, pp. 5-6.

41 Financial Control Authority, *Regulatory sandbox lessons learned report, October 2017*, pp. 5-6.

42 OFGEM, *Insights from running the regulatory sandbox, October 2018*, p. 1.

3 REGULATORY GUIDANCE

DRAFT RECOMMENDATION 2: REGULATORY GUIDANCE

Introduce a new innovation inquiry service to provide regulatory guidance to proof-of-concept trial proponents and innovators, that:

- creates a clear process for guidance and feedback for innovative projects
- helps communicate clearly to innovators that this guidance and feedback is available
- is led by the AER as the first point of contact
- builds on the AER's established processes to answer regulatory inquiries
- provides 'fast, frank feedback'
- does not provide legal advice
- is open to all and does not charge a fee for access
- can provide a first step towards access to the other regulatory sandbox tools
- allows referrals to be coordinated across the market bodies
- encourages the identification of potential regulatory barriers by market bodies through the AER publishing high-level information on the usage of the service.

This chapter sets out the Commission's preferred approach to coordinated regulatory guidance and feedback for proponents of innovative trials in the national energy markets. This **innovation inquiry service** has been developed in collaboration with the AEMO, AER, ARENA and ECA.

This chapter provides an overview of the Commission's preferred approach:

- section 3.1 provides background and summarises our interim advice
- section 3.2 defines the scope of guidance and feedback innovators can expect to receive
- section 3.3 outlines how innovators can access this new service
- section 3.4 summarises how the new service will be implemented.

3.1 Background and interim advice

The Commission's interim advice proposed the development of a new coordinated approach to providing feedback and guidance to proponents of trials. It was suggested that the feedback would involve one market body being a clear first point of contact for proof-of-concept trials that is able to provide "fast, frank feedback" on a range of issues, whilst referring to the other market bodies where appropriate.

The interim advice was based on stakeholder feedback that navigating the regulatory arrangements and the complexity of the regulatory framework can be challenging for newer and smaller participants, and that providing further guidance and advice on regulations would help address these challenges.

The feedback from the majority of the stakeholders was that the provision of advice was an important element of facilitating innovation and proof-of-concept trials. According to the stakeholders, it was important that parties trying to introduce innovative technologies were supported in understanding the relevant regulatory requirements.

Submissions to the consultation paper also highlighted that a significant amount of guidance and advice was already being provided by the AER and AEMO. Meanwhile, submissions from smaller innovators noted that it was difficult for them to find the right starting point for guidance as they might not know what to ask. It was also difficult for them to know which organisations to approach and acquiring advice from the private sector seemed to involve large costs.

Although some stakeholders called for a “one stop shop” for guidance, due to a number of challenges associated with this approach, a “first stop shop” approach combined with referrals between the market bodies and ARENA was considered to better address the need for guidance.

The interim advice suggested that a new process for coordinated guidance and feedback would be developed collaboratively by the AEMC, AER, AEMO, ARENA and ECA commencing in the first half of 2019, ahead of law or rule changes to create new regulatory tools.

3.2 Scope of guidance-what will innovators receive?

The Commission's draft recommendation is that a coordinated regulatory guidance and feedback service, the innovation inquiry service, will be established to provide guidance and feedback to trial proponents and innovators on navigating the energy regulatory arrangements. This will build on the established processes the AER and AEMO use to provide guidance.

The AER will be the first point of contact for trial proponents and innovators to seek guidance on matters related to regulation. The AER will support guidance seekers in their understanding of the relevant regulatory arrangements and where appropriate refer guidance seekers to other institutions. Once a guidance seeker is referred to them, the other institutions will support guidance seekers in their understanding of the matters administered by them.

The new service will build on the existing arrangements for providing guidance to stakeholders, such as through the general inquiries line run by some market bodies, which currently provide guidance and feedback for all stakeholders including to innovators. The new arrangements will provide guidance and feedback through a dedicated channel for proponents of trials and innovators. A formal avenue is expected to increase the accessibility of guidance and feedback for trial proponents and innovators and promote within the market bodies a greater understanding of the innovation happening in the industry, which can inform regulatory reform.

3.2.1 **Scope of the innovation inquiry service**

The objective of the new service channel will be to encourage innovation which has the potential to contribute to the long term interest of consumers through promoting a greater understanding of the energy regulatory arrangements.

The service will provide an informal steer on regulatory implications for proof-of-concept trials and innovative products, services and business models being proposed by guidance seekers in order to help them successfully navigate the energy regulatory arrangements and any specific regulatory challenges they may face. Guidance seekers can expect the service to help them explore and understand:

- what regulations and rules may apply to their specific project or business model
- options available to progress a project or business model with respect to the regulations
- how to undertake any formal regulatory processes or applications and who they can contact to progress the process.

The new service channel will be aimed at proponents of innovative trials as well as proponents of innovative products, services or business models. The service will be open to access for all innovating businesses in the energy industry regardless of their size and the development stage of the innovative proposition. However, smaller and newer industry players are expected to benefit more from this service.

The aim of establishing the new service channel is to create a clear process for guidance and feedback for innovative projects and to help communicate clearer to innovators that this guidance and feedback is available. It is important to note that the public and proponents of projects that are not considered to be innovative can continue to access similar levels of guidance and feedback through market bodies' general inquiry lines.

The AER may put in place eligibility criteria for accessing the new service channel and require some information to be provided by guidance seekers. The service provided will be an informal steer that represents staff views rather than a regulatory decision or an organisational view.

Depending on the request, guidance may be delivered in the form of responses to queries provided via email or over the phone, or involve a greater engagement which includes multiple iterations of advice delivered face to face over several months.

If the other recommended regulatory sandbox tools, including the waiver and trial rule change process become available to trial proponents, the guidance service will also provide advice in relation to these tools and act as a first point of call for trial proponents considering access to the other tools.

The provision of the service will not involve a fee to be paid by guidance seekers.

3.2.2 **Services out of scope of the information inquiry line**

The Commission's draft recommendation is that the coordinated guidance and feedback service will not provide legal advice, binding rulings, regulatory decisions, endorsements or business incubator services.

The guidance service would not be the appropriate avenue to seek and provide regulatory decisions which are made by the AER board and require thorough deliberation. It would not be appropriate for market bodies that are responsible for developing and applying the rules to provide binding legal advice on their interpretation of the legislation. The Commission agrees with the AER submission that binding rulings will involve extra risk for regulators and are not likely to be appropriate. If the market bodies were required to provide regulatory decisions, legal and binding advice, it may limit their ability to provide advice promptly and frankly. Submissions from stakeholders suggested that innovators needed prompt and frank advice rather than binding rulings.

The guidance and feedback service is not intended to provide an endorsement or certification that a product, service or business model is compliant with the rules. The feedback and guidance provided by the service will be views of the staff rather than an official organisational view or a regulatory decision.

The scope of the guidance and feedback service does not extend to helping stakeholders with non-regulatory issues in order to help them launch successful businesses. Such services would be better provided by business incubators or other organisations with relevant expertise.

3.3 Delivery of guidance - how will innovators access this guidance?

This section outlines the Commission's draft recommendation on the manner in which the service will be delivered to guidance seekers, including the principles that would be relevant to determine the level of guidance provided to a guidance seeker.

3.3.1 General principles for delivery of guidance

The guidance and feedback service will endeavour to:

- be generally welcoming to inquiries, not have unnecessary barriers for stakeholders to access guidance and adopt a “no wrong doors” approach whereby a stakeholder can access the service even if they didn’t use the correct method to contact the guidance and feedback service
- be as helpful as possible, by providing the guidance seekers with the right amount and right kind of information to help them understand their regulatory obligations and ways of addressing regulatory issues, subject to prioritising resources in line with the interests of consumers
- provide feedback to innovators as fast as practicable subject to other demands on resources.

3.3.2 Relevant factors for the level of service

For the guidance service to be effective in promoting innovation, the level of service and the type of engagement provided to a guidance seeker will need to reflect the needs of the guidance seeker and the potential benefits of the proposition to the consumers. Some stakeholders seeking guidance through the service may only need guidance on a minor matter than can be clarified relatively quickly and without significant ongoing engagement.

Such inquiries could be suitably answered via email communication between the guidance seeker and the AER or other market bodies. Other queries may be more complex and providing guidance may require face-to-face advice or multiple exchanges over several months. The AER and the other market bodies have the discretion to determine the amount of time and effort to be dedicated to queries and the type of engagement that would be appropriate to addressing a request for guidance. The market body delivering advice may ask guidance seekers to provide further information regarding their circumstances in order to be able to provide guidance. Some factors that would be relevant to determine the level of resources to be dedicated to a query would include the following:

- **Resources available to the party seeking guidance:** Smaller and newer organisation may have fewer resources of their own and less capability to address regulatory issues and navigate the framework. As such, these types of organisations would likely need a greater degree of support and guidance in comparison to larger organisations.
- **Potential benefits to consumers:** Innovations that are likely to lead to greater benefit to consumers would need to be provided greater regulatory support in navigating the regulatory framework.
- **The development stage of the innovation or trial:** Innovations that are more developed are more likely to become commercial and provide potential benefit to consumers. Therefore, innovations that are more developed may need to be provided greater support than innovations that are at the initial stages of development.
- **Complexity of the inquiry:** It is expected that more complex queries would require more resourcing to address.
- **Amount of advice previously provided to the party:** In distributing guidance and a feedback resource, it would also be relevant to consider the amount of advice that has previously been provided to a party through the guidance and feedback service.

3.4 Implementation-when and how the service comes into effect?

The following section outlines the Commission's draft recommendation on the approach to implementation of the coordinated guidance and feedback service.

3.4.1 The first stop for seeking guidance

The AER will be the first point of contact for guidance seekers under the coordinated guidance and feedback service. The AER is the appropriate body to take on this role because it is responsible for administering the energy regulations and has significant experience in providing guidance and feedback. It currently provides a significant amount of informal guidance and feedback to participants interacting with the regulatory framework through its general inquiries channels, email services for specific areas of regulation and through stakeholders directly contacting AER staff. As such there is potential for the coordinated guidance and feedback service to leverage the existing inquiries process managed by the AER. It is expected that most of the inquiries received through the coordinated guidance and

feedback service would be best handled by the AER as it's responsible for monitoring compliance with the regulatory framework and taking possible enforcement actions.

3.4.2 How coordination between the market bodies will work

If a request for guidance would be better addressed by a different market body, or query would benefit from the input of another market body, the AER will refer the query to the relevant points of contact within the other market institutions or establish a cross organisational team to address the query. The AER may also refer the request for guidance to ARENA or jurisdictional regulators if deemed appropriate. It is expected, for example, that queries related to market participant registrations would be referred to the registrations team within AEMO, queries related to the rule change process and ongoing rule changes would be referred to the AEMC and funding related queries may be referred to ARENA in some instances.

The market bodies and ARENA will coordinate further to develop procedures for coordinating referrals between the institutions and establish the points of contacts for certain types of inquiries within each of the relevant bodies. This will involve developing a list of contacts across different areas of AEMO, AEMC and ARENA to allow the AER to direct queries to the correct contacts quickly and effectively. These procedures may also provide details such as the process for assigning and using the same unique case ID's across organisations, sharing of contact information and requirements for record keeping. Once a guidance seeker is referred to them, the other institutions will support guidance seekers in their understanding of the matters administered by them. The provision of this service may require additional software shared between the market bodies.

Appropriate referrals of request for guidance within market bodies and ARENA is required to avoid the need for one market body to provide advice on behalf of another organisation. Referrals would also limit the need for a market body to share a guidance seeker's potentially confidential project information with another market body as this information could be provided by the guidance seeker itself after the referral. A guidance seeker could also provide consent for a market body to share their project information with other market bodies.

3.4.3 The Innovation inquiry service's shop front

The success of the service in promoting a greater understanding of the regulatory arrangements in order to promote innovation is likely to depend on its accessibility and recognition by guidance seekers. As such the service needs to be accessible under a visible shop front so that the service is widely perceived as an avenue for regulatory assistance aimed at promoting innovation which is accessible to trial proponents and innovators. To achieve this, the new guidance and feedback service needs to be easily accessible for potential users and publicly available through the websites of institutions, and be promoted to potential users of the service.

Potential perception challenges faced by the current arrangements

Submissions to the consultation paper highlighted that although guidance was currently provided by the AER through their general inquiries line, including to innovators and those

seeking to launch trials, and previously by AEMO through the innovation centre, it may not be readily accessible for those less experienced with the regulatory and institutional arrangements. Some stakeholders highlighted that it was difficult for them to find the right starting point for guidance as they might not know what to ask and which organisations to approach. This suggests that there is currently likely to be a perception and recognition barrier associated with the current arrangements which may limit trial proponents and innovators from accessing the required regulatory guidance and advice.

Establishing a shop front

Making the guidance service easily accessible through the website and promoting the service among potential users is expected to address the perception challenges and promote use of the service amongst a broader range of innovators and trial proponents.

To establish the shop front:

- An external innovation email service will be set up by the AER which will include a phone number and an email address through which the guidance service can be accessed.
- The market bodies will establish a web-page for the service on their respective websites explaining what that service can offer to innovators and trial proponents and how guidance can be accessed by interested parties.
- The guidance service may be promoted by the market bodies after the establishment of the innovation email and website service.

Fee associated with the service

The provision of the service will not involve a fee to be paid by guidance seekers. If the service was provided for a fee, it may discourage some innovators and trial proponents from seeking advice and the service may be seen to compete with commercial law firms and consultants providing regulatory advice. If proponents pay for guidance and feedback from the market bodies, they may expect a level of service commensurate with what they can obtain from the market. This would ultimately lead to poorer outcomes for consumers if the AER and other market bodies provided a service that would be better provided on a competitive basis.

Resourcing

Market bodies already provide guidance to businesses and the public. The establishment of the innovation inquiry service is likely to lead to an increase in guidance requests. The AER may need to consider how to provide appropriate resources to this new service, recognising the benefits of innovation in the energy sector can provide to consumers and businesses in terms of better services and lower prices and likely productivity gains in the wider economy.

Knowledge sharing

The interim advice noted the importance of knowledge sharing to inform regulators and the market of the innovation happening in the industry and regulatory barriers being faced by innovative propositions. Although the regulatory waiver process will form the main avenue for knowledge sharing, there is potential for the coordinated guidance and feedback service to

capture and share information relevant for regulators and innovators, as well as process improvement. Through the guidance service, areas of regulation that are unnecessarily complex may be identified, and these could inform regulatory reform to simplify arrangements. The AER will capture and publish high level information regarding usage of the guidance service, including a breakdown of:

- the types and areas of innovation seeking guidance e.g. stand-alone power systems, peer to peer trading etc.
- areas of regulation regarding which guidance is sought
- utilisation of the service.

3.4.4

Continued development

If, as recommended, the other regulatory tools including the regulatory waiver and trial rule change process are established, the market bodies will also provide guidance and feedback in relation to these tools.

After the availability of the other tools, there will be scope to leverage the guidance service. The AER would provide early guidance for regulatory relief applicants and provide feedback to proponents on their applications. OFGEM found that applicants for their regulatory sandbox initiative often needed advice rather than regulatory relief.

After the trial rule change process becoming available to trial proponents and innovators, the AER would refer proponents to the AEMC to provide guidance in relation to this.

There may be future opportunities to improve the coordinated guidance and feedback service after it begins operating. As the lead organisation in the guidance and feedback service, the AER may at a future date modify the guidance and service to improve its effectiveness and efficiency. As an example, the AER may publish fact sheets targeted at innovative projects and business models. These could describe how the rules apply to certain kinds of innovative services, similar to the current AER practice of publishing compliance checks and reporting. Modification or improvements of the service will be done in collaboration with the other market institutions. The AER may also consider the need for further formalisation to improve the service and modify the service accordingly. Examples of further formalisation may include:

- Requiring guidance seekers to meet eligibility criteria in order to be able to access the service; this could for example assist the AER to dedicate resources towards more pressing issues.
- Requiring guidance seekers to complete a form describing their proposition and regulatory challenges being faced.

QUESTION 1: INNOVATION INQUIRY SERVICE

Will the proposed design of the innovation inquiry service improve the level of guidance available to proof-of-concept trial proponents?

4 REGULATORY WAIVERS

DRAFT RECOMMENDATION 3: REGULATORY WAIVERS

- Establish a broad power for the AER to grant regulatory waivers to proof-of-concept trials, meeting the regulatory waiver test, and entry and eligibility requirements set out in the sandbox guideline.
- Sandbox trials will have to meet a high level test, the regulatory waiver test, set out in the National Electricity Law (NEL), National Energy Retail Law (NERL) and National Gas Law (NGL).
- The regulatory waiver test will require the AER to assess if a trial is consistent with the national electricity objective (NEO), national energy retail objective (NERO) or national gas objective (NGO) and if it is genuinely innovative with the potential to lead to better services and outcomes for customers.
- The AER will develop a sandbox guideline in consultation with stakeholders.
- The requirement for the AER to develop a sandbox guideline will be set out in the National Electricity Rules (NER), National Energy Retail Rules (NERR) and National Gas Rules (NGR) with the AER retaining some discretion to define the entry and eligibility criteria in consultation with stakeholders.
- Trials will have to meet the entry criteria in the sandbox guideline required by the NER, NERR and NGR.
- Trials will have to meet the eligibility criteria in the sandbox guideline required by the NER, NERR and NGR.
- Trials will be limited in time and scope.
- Regulatory waivers can only be granted for regulatory barriers arising out of existing rules.
- The AER will have a time limit to issue a decision on regulatory waiver applications specified in the sandbox guideline.
- The AER can impose conditions on a waiver and revoke the waiver if conditions are not met.
- Trial proponents can be required under the sandbox guideline to report to the AER on their performance against the conditions of their waiver.
- The AER will have the ability to extend waivers to allow proponents of successful trials to become fully compliant with the rules.

As outlined in chapter 2, if a trial cannot be undertaken under the existing rules, a proponent should have the opportunity to apply to the AER for a waiver of specific regulatory requirements of the rules for a time and size limited trial. The AER cannot grant a waiver for obligations set out in existing laws.

The AER currently has powers to grant waivers or exemptions from regulations under the NEL/NERL/NGL (energy laws) such as the existing framework for ring-fencing waivers. The Commission's draft recommendation is that these powers could be expanded to apply to waivers of specific regulations for the purpose of conducting trials. This will involve changes to the energy laws and expansion of the AER's existing functions and powers including publication of a trial guideline the AER would have to develop in consultation with stakeholders.

The objectives of regulatory waivers for trials are:

- on a broader level, encourage innovation which has the potential to contribute to the long-term interests of customers and thereby advance the NEO/NERO/NGO (energy objectives)
- more specifically, to proceed with trials where regulatory barriers in the existing rules have been identified.

This chapter explains the Commission's draft recommendation on how the regulatory waiver framework could work:

- Section 4.1 provides background information and a summary of the Commission's interim advice
- Section 4.2 explains what changes to existing laws and rule are needed
- Section 4.3 considers how trials can be run under the regulatory waiver framework and what happens after the trial has ended.

4.1 Background and interim advice

In its interim advice, the Commission established that some trials may not be able to go ahead because of regulatory barriers arising from existing rules, even though they may potentially benefit consumers and thereby meet the broader objective of the NEO. The Commission is conscious that innovation can lead to significant consumer benefits and considers that there should be provisions in the market design to allow innovators to conduct proof-of-concept tests. At the same time, it is important that consumer interests are protected during such trials. The Commission's draft position is that where innovation has the potential to contribute to the long-term interest of consumers, there should be a process to waive regulations temporarily to allow for proof-of-concept-trials. This will result in a more flexible regulatory framework, adaptable to innovation and ultimately leading to an increase in the long-term benefit of consumers.

The Commission's interim advice proposed that the AER's existing powers and functions could be expanded to allow it to grant regulatory waivers for trials prevented from going ahead because of regulatory barriers. The Commission noted that the assessment of regulatory waiver applications should be subject to a sandbox guideline developed and published by the AER.

In its interim advice, the Commission further noted that regulatory waivers:

- should be time-limited

- only be able to waive requirements of existing rules.

In their submission to the Commission's consultation paper⁴³, stakeholders pointed out that some trials were prevented from going ahead because of the current regulatory framework. For example, ARENA highlighted that it had worked with trials that have not proceeded due to regulatory barriers.⁴⁴ TasNetworks submitted that its proposed embedded network and microgrid project at Nubeena has not proceeded because of regulatory barriers.⁴⁵ Mondo submitted that a number of trials it was considering were currently limited by the regulatory framework, including micro-grids, community peer-to-peer trading and developing and testing of market models.⁴⁶

Stakeholders also provided comment on how these regulatory barriers can be addressed to allow time-limited trials to proceed. For example, the AER favoured the establishment of a broad power for the AER to waive parts of the rules to support trials.⁴⁷ ARENA highlighted that one of the challenges in facilitating innovation is that it is not always obvious when and where new innovations will arise, and where a regulatory exemption may be beneficial. It favours a broad exemption power based on sound governance principles.⁴⁸ Mondo suggested that in considering the design of the regulatory sandbox, it was important to balance the need for a robust and transparent assessment process with the need to support prompt decision-making and flexibility to accommodate the nature of innovative projects.⁴⁹

Consumer protections were another issue addressed by stakeholders in their submissions to our consultation paper. The AER submitted that the requirements for trials should, in principle, provide the same consumer protections as they have under the NEL/NERL and NER/NERR. Trial proponents should also demonstrate that their trial will not have a negative impact on competitiveness of retail and wholesale markets, or on other market participants.⁵⁰ Ausgrid submitted that for consumers, participation in a trial must be voluntary, consumers must not be worse off by participating in the trial and at the end of the trial, consumers must be able to fall back to their pre-existing consumer protections.⁵¹

The Commission's proposed framework for regulatory waivers is based on the consultation paper, the submissions we received to the consultation paper, our interim advice and additional discussions with stakeholders.

Regulatory waivers to facilitate trials where regulatory barriers would prevent them from being commissioned are already in place in some overseas jurisdictions. Box 1 provides an example on regulatory experiments to promote innovation in Italy.

43 AEMC, *Regulatory sandbox arrangements to support proof-of-concept trials*, consultation paper, December 2018.

44 ARENA submission to the consultation paper, p.1.

45 TasNetworks submission to the consultation paper, p. 3.

46 Mondo submission to consultation paper, p.2.

47 AER submission to the consultation paper, p.2.

48 ARENA, submission to the consultation paper, p.4.

49 Mondo, submission to the consultation paper, p.2.

50 AER submission to the consultation paper, p. 6.

51 Ausgrid, submission to the consultation paper, p.8.

BOX 1: REGULATORY EXPERIMENTS IN ITALY

Following a dramatic increase in renewable-sourced intermittent generation, the Italian power system had to cope with the secure integration of renewable energy sources and distributed generation. The Italian Regulatory Authority (ARERA) identified innovation in network design and management, promoting demand response and aggregation of distributed energy resources as the most pressing areas of concern. According to ARERA, regulation should not only follow, but also encourage innovation. Certain regulatory schemes risk being either too restrictive and discouraging investment, or too generous and therefore not resulting in the most efficient solution.

ARERA's view is that innovation in the energy sector must go beyond laboratory experiments and smart grids.

The Italian program of regulatory experiments has been legally grounded upon regulatory decisions. All regulatory powers are in Italian laws. ARERA sets out the provisions to carry out regulatory experiments aimed at fostering innovation after consultation with stakeholders. The regulatory experiments project covers five initiatives: smart grids; storage and dynamic transformer rating (DTR); electric vehicle recharge; in-home displays, and; flexibility and demand response. For each initiative, ARERA has issued a specific regulatory exemption/derogation. Each regulatory experiment is usually limited to a few years. Proposals are assessed using several criteria, including qualitative indicators or technical scores, the costs of the project and the projected benefits.

Regulatory experiments are carried out in the interest of consumers and are based on public calls for proposals and consultation. Project outcomes are made public.

For example, ARERA has issued a regulatory exemption for experiments on smart electricity grids. ARERA also allowed for extra remuneration of capital costs at 2 per cent above the ordinary rate of return for a period of up to 12 years. The purpose of this program was to test advanced solutions and functionalities for improved automation and control of network components in real medium voltage networks and operational conditions. The program was launched in 2010, installed and operated between 2012 and 2015 and terminated in 2014 with consequent sharing of learnings with the public. This regulatory experiment resulted in new incentive rules for large-scale roll-out from 2016.

Source: International smart grid action network, *Innovative regulatory approaches with focus on experimental sandboxes*, May 2019, pp 29-36.

4.2

Scope of power

The Commission's draft recommendation is to extend the AER's existing powers and functions to grant regulatory relief for sandbox trials. This means that the AER will be granted a broad power of regulatory waiver in the energy laws, subject to a sandbox guideline required by the NER, NERR and NGR (energy rules).

4.2.1 **What will be the power granted to the AER**

The Commission's draft recommendation is that the AER should be granted a new regulatory waiver power in the energy laws, that provides the ability to:

- grant time-limited waivers from the energy rules
- to prioritise which trials it should consider first
- to set conditions on waivers.

The Commission further proposes that trial applications should be subject to a sandbox guideline required by the energy rules, setting out process and detailed conditions, that is developed by the AER in consultation with stakeholders. Further detail on the sandbox guideline can be found in Section 4.2.3.

While the Commission considers that all rules should be within scope, the AER's power to grant regulatory waivers will be limited by criteria in the rules.

Under these new powers, the AER will be able to provide temporary regulatory relief from specific provisions of a rule (or rules) for the purpose of trials. Proponents of a trial will be able to apply to the AER for a time-limited waiver.

4.2.2 **Legal implementation-what law/rule changes will be required to give effect to the waiver power?**

In order to extend the AER's power to be able to grant regulatory waivers for trial, a number of law and rules changes have to be completed:

- expansion of the AER's heads of power under the energy laws to include a broad exemptions power
- potential new provision under energy laws allowing persons to request an exemption for the purposes of a trial
- energy rule changes requiring the AER to develop a sandbox guideline in accordance with the rules' consultation procedure and for exemptions to be granted in accordance with that guideline.

The Commission's draft recommendation is that the AER should be granted a broad exemptions power to facilitate trials to be embedded in the energy laws, with the process to be outlined in the energy rules and AER guidelines.

For example, this can be achieved through a new head of power under s15 NEL. The Commission further considers that the NEL may also include certain factors that the AER must have regard to (with the guidelines to outline the AER's approach with respect to those factors), that is, a new s16A NEL (a sandbox guideline).

Specifically, this may include a new provision that gives AER power to grant certain exemptions to trial proponents:

- in accordance with guidelines developed by the AER
- provided the exemption will or is likely to (or has the potential to) contribute to the achievement of the national electricity objective.

The AER is required to develop guidelines in accordance with the rules' consultation procedures.

The Commission also proposes that the NER would further outline what needs to go in the sandbox guideline, consistent with the factors outlined in the new clause 16A.

Similar provisions would apply to the NERL/NGL and the NERL/NGR.

4.2.3

Sandbox guideline

The Commission proposes that the AER's power to waive regulations for the purpose of conducting trials should be subject to a sandbox guideline required by the energy rules. The objective of the sandbox guideline is to:

- provide and facilitate a clear and transparent framework for trial proponents and market participants
- promote the energy objectives by providing a framework for innovators to conduct trials and promoting competition in the electricity sector.

The sandbox guideline should be developed in consultation with stakeholders and the AER will retain flexibility to amend the sandbox guideline in consultation with stakeholders.

The Commission considers that a sandbox guideline provides trial proponents and market participants with a transparent and predictable process. The sandbox guideline would set out the requirements trial proponents would have to meet:

- an overarching test set out in the energy laws (the regulatory waiver test)
- entry requirements to be met before being able to apply for a waiver (based on requirements in the energy rules)
- eligibility criteria to be able to be granted a waiver (based on requirements in the energy rules).

These criteria are discussed in section 4.3.1.

4.2.4

What parts of the rules will the AER be able to waive?

The Commission's draft recommendation is that all rules should be within scope including Chapters 6 and 6A of the NER, but the AER's power will be limited by criteria in the Rules. Chapters 6 and 6A contain rules relating to the economic regulation of distribution and transmission services.

This means that when making a revenue determination, the effect of granting a regulatory waiver could mean that network businesses can be allowed to recover, as regulated revenue, trial expenditure that would otherwise not be recoverable in this way.

The AER will not be able to alter the operation of an existing rule. Waivers will only exempt a person from the application of a rule.

4.2.5 What are the constraints on the power granted to the AER?

The Commission's draft recommendation is that the AER should be able to grant regulatory waivers for all rules. However, there are restrictions on what the waivers can allow and what they can't allow, specifically, the AER can't:

- waive provisions under the energy Laws
- alter existing rules
- exempt themselves
- grant waivers for trials not meeting the energy objectives.

QUESTION 2: AER SANDBOX WAIVERS SCOPE OF POWER

(a) Do you agree with the proposed extension of the powers of the AER to grant regulatory relief to innovative trials facing a regulatory barrier?

(b) Do you agree the waiver power should encompass the National Gas Rules? Why or why not?

4.3 Trials under the regulatory waiver framework

The AER's regulatory waiver is one of the options available under the Commission's proposed regulatory sandbox toolkit. It is expected that trial proponents would have gone through the regulatory guidance step of the regulatory sandbox toolkit and that a regulatory barrier arising from existing rules has been identified. The Commission considers it important that the process of obtaining a regulatory waiver for trials is as transparent and predictable as reasonably possible. Innovators value a fast and simple to navigate process and market participants and customers value the protection of their existing rights. This section sets out how regulatory waivers can be implemented in practice.

4.3.1 Applying for a regulatory waiver

The Commission considers that there would be a number of transparent and predictable steps in the application process for a regulatory waiver.

The AER would have an overarching eligibility test in the energy laws to determine if a trial can be considered for a regulatory waiver. This **regulatory waiver test** would assess if the trial is:

- consistent with the energy objectives
- innovative and likely to lead to better services and prices for consumers.

If the trial meets the regulatory waiver test, the AER will assess the entry and eligibility requirements specified in the sandbox guideline.

The Commission considers that the minimum **entry requirements specified in the energy rules** for an application to be considered by the AER should include:

- the details of the trial

- financial and operational capacity of the trial proponent
- details of how consumer protections will be maintained
- identification of the rule(s) they seek exemption from and reason why.

If a trial meets the regulatory waiver test and the entry requirements, the AER can assess the trial against the **eligibility criteria** set out in the guidelines. The Commission considers that the minimum eligibility criteria specified in the energy rules should include that the trial:

- will be limited in time, scope and scale
- be unable to be conducted without the waiver
- is genuinely innovative
- has appropriate consumer protections (see also section 4.3.2).

The sandbox guideline will also set out the time frame within which the AER must issue a decision. The Commission considers that given the innovative nature of the trials likely to apply for a regulatory waiver, a relatively short time frame is appropriate. In line with the other sandbox tools presented in this draft report, the Commission considers that there should be a time-limit for regulatory waiver applications.

The AER will be able to impose conditions on the grant of a waiver and revoke the waiver if conditions are not met. The sandbox guideline could also require the trial proponent to report their compliance with any conditions set out in the regulatory waiver to the AER.

The Commission considers that a sandbox guideline provides a transparent framework for trial proponents and market participants. In particular, the Commission notes that the AER has substantial experience with guidelines (Box 2 shows an example) and that a guideline can be updated when required to respond to changing market conditions. The development of a guideline involves additional stakeholder consultation and adds time to the implementation of the regulatory waiver process, but the Commission believes that this is far outweighed by the benefits the AER, stakeholders and consumers derive from a sandbox guideline.

BOX 2: RING-FENCING WAIVERS

The purpose of ring-fencing is to separate competitive and regulated parts of a DNSP to protect the long-term interest of consumers. The AER is required to publish a ring-fencing guideline by the National Electricity Rules. The guideline is developed in consultation with stakeholders and can be amended. It broadly covers:

- the nature of authority
- how the guideline relates to other regulatory instruments
- obligations under the ring-fencing guidelines
- waiver applications
- compliance and enforcement.

The waiver guidelines include information and material that applicants must provide to the AER and the AER's considerations when assessing an application. In particular, when assessing waiver applications, the AER **must** have regard to:

- The NEO
- the potential for cross-subsidisation and discrimination if the waiver is granted
- whether the benefit, or likely benefit, to electricity consumers of the DNSP complying with the obligation (including any benefit, or likely benefit, from increased competition) would be outweighed by the cost to the DNSP of complying with that obligation.

The AER **may** have regard to:

- any other matter it considers relevant
- request from the DNSP any further information the AER considers appropriate
- invite public submissions on the application
- otherwise conduct such consultation as it considers appropriate with any person.

Source: AER, *Ring-fencing guideline electricity distribution*, Version 2, October 2017.

The AER should also maintain a public register of the regulatory waivers it granted including broad trial details. In order to improve and to adapt the regulatory framework in the long-run to changes in service provision due to innovation, the AER should also publish a regular, at least annual, publication of lessons learned from trials conducted under a regulatory waiver exemption. These can be general lessons not containing any confidential information.

If the proponent decides at the end of the trial that the trial was successful and that they want to continue the operation of the service, the trial has to become fully compliant with the rules. It may be possible for a trial proponent to become fully compliant during the trial period, however, this could involve significant costs and it is uncertain if trial proponents would be able to raise sufficient funds during a trial without knowing the result. On balance, the Commission considers that the AER should have the option to extend the waiver, including the consumer protection provisions, to such a period that is sufficient to allow the trial proponent to become fully compliant with the rules.

4.3.2 Consumer protections

Generally, trials conducted under a waiver would benefit consumers because waivers will only be granted if the trial will, or is likely to, contribute to the achievement of the energy objectives.

There are limited circumstances, where consumer protections or rights could be affected without making the trial ineligible. For example, there may be a temporary limitation on consumers but the consumer has been informed of this and willingly accepted to join the trial. Or consumers may not be able to exit the trial if consumer protections are unexpectedly affected during a trial.

The Commission proposes that the sandbox guidelines should set out criteria regarding consumer protections a trial proponent would have to fulfil before being able to apply for a waiver. So that consumers who participate in a trial are not worse off than under their existing arrangements, the Commission considers that waivers should only be granted if the AER can be assured that the trial proponent has appropriate consumer protections in place. However, given the innovative nature of trials, it will be important to provide the AER with the discretion to vary these conditions according to the nature of the trials applying for regulatory waivers. The conditions the Commission consider the most important that should be included in the sandbox guideline are that the trial applicant has:

- obtained explicit and informed consent from consumers that are interacting directly with a trial where reasonably practical
- provided consumers with a process that enables them to request the AER terminates a trial in respect of that customer in circumstances of poor performance by the trial conductor or poor outcomes
- put into place provisions for consumers to be reverted to arrangements similar to pre-existing arrangements during or at the end of the trial.

The AER can use its discretion to impose additional conditions in a sandbox waiver if it considers that existing consumer protections may not be sufficient given the nature and scope of a proposed trial.

4.3.3

Stakeholder consultation

The Commission's draft recommendation is that for waiver applications likely to have an impact on other market participants, the AER is required to allow for public consultation. This is important because once a waiver has been granted there will be no basis for third-party action as the obligation on the trial proponent to operate under a specific regulation has been waived. The AER should retain some discretion in deciding whether to conduct public consultation for other waiver applications.

QUESTION 3: REGULATORY WAIVERS IMPLEMENTATION

- (a) Should there be a time-limit on the waiver application process, if so, what time-frame would be appropriate?
- (b) Should the AER be able to extend regulatory waivers to allow successful trials to become fully compliant with the rules?
- (c) Are the proposed provisions made in the regulatory waiver framework sufficient to protect customers from unintended consequences of participating or being impacted by the conduct of a trial?
- (d) Is the proposed process of stakeholder consultation sufficient to allow market participants and consumers and their representatives to fully engage with the AER as part of the waiver application process?

5 TRIAL RULE CHANGES

DRAFT RECOMMENDATION 4: NEW TRIAL RULE MAKING PROCESS

Introduce a new trial rule making process, of less than eight weeks duration with the following features:

- a single round of consultation
- the current rule making tests (NEO, NGO and NERO) apply to trial rule changes
- any person (apart from the AEMC) may lodge a rule change proposal
- restricted to time limited trials, where the trial has a reasonable prospect of delivering a material benefit to consumers and where consideration of a permanent rule change would otherwise be hampered through inadequate information or experience
- a precondition requiring the rule change proponent to demonstrate that a rule change is necessary
- the AEMC is able to require detailed information about the proposed trial itself
- the AEMC may impose conditions on the use of the trial rule change
- a mechanism to terminate the rule change process if it becomes apparent that the final form of the rule is unlikely to lead to a trial
- a requirement for explicit informed consent from materially impacted consumers participating directly in a trial.

This chapter sets out the Commission's proposed approach to trial rule changes.

- Section 5.1 outlines
 - the role of the energy rules and procedures and
 - the current rule change processes
- Section 5.2 briefly discusses submissions to the consultation paper
- Section 5.3 outlines a proposed new process for making a trial rule
- Section 5.4 discusses preconditions for lodgement
- Section 5.5 looks at the trial rule change proposal content
- Section 5.6 examines the application of conditions to a trial rule change
- Section 5.7 looks at how consumer protection will be achieved.

5.1

Background

5.1.1

National energy rules

The NER, NGR and NERR (energy rules):

- determine how companies can operate and participate in the competitive generation and retail sectors, outlining their rights and responsibilities

- govern the economic regulation of electricity transmission and distribution networks and gas pipelines, so that consumers do not pay more than necessary for their energy.

The rules have the force of law and are regularly amended by the AEMC or, in special and limited circumstances, by the South Australian Minister for Mineral Resources & Energy who is the Minister responsible for the AEMC to the Council of Australian Governments (COAG).

Rule changes can only deal with matters that are delegated to the rules under the NEL, NGL and NERL (energy laws). The rules cannot, of themselves, override laws, regulations and unrelated statutory instruments.

5.1.2 Procedures and guidelines

Procedures are instruments setting out the detailed requirements for activities carried out under the rules. Guidelines set out the approach taken to rules requirements.

Procedures in the national energy markets are made under and in accordance with the energy laws and the energy rules.

The:

- Australian Energy Market Operator (AEMO)
- Australian Energy Regulator (AER) and
- Reliability Panel

each have a role in developing procedures and guidelines.

5.1.3 Rule changes

Where a worthwhile innovation trial cannot be implemented under existing rules or through a waiver or procedures, then in some cases a temporary rule change may be able to facilitate the trial.

The NEL, NGL and NERL currently allow for three rule change processes. These are the standard, expedited or fast-tracked rule changes.⁵² Expedited and fast track processes are only available in particular circumstances.

Standard rule changes

The timeframe for a standard rule change process is approximately 6 months from the publication of a consultation paper on the proposed rule to the final rule determination; however this timeframe can be extended in certain circumstances. Under the standard process there are two opportunities for stakeholders to make written submissions in advance of the draft and final determinations.

There are a number of formal stages in a standard rule change process:

1. The Proponent submits a rule change request
2. the AEMC commences the rule change process and seeks submissions on the rule change request

⁵² For further details see AEMC, *The rule change process, A guide for stakeholders*, 20 June 2017.

3. Stakeholders (including the proponent, if they wish) lodge submissions on the rule change proposal
4. the AEMC publishes a draft rule determination and seeks submissions on the draft determination
5. Stakeholders (including the proponent, if they wish) lodge submission on the draft rule determination
6. the AEMC publishes a final rule determination.

Figure 5.1: Standard rule change process



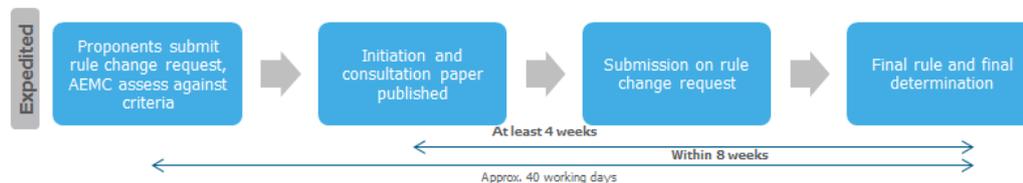
Source: AEMC

In addition to the steps referred to above, the Commission seeks to engage with stakeholders through discussions throughout the rule change process which can take the form of informal one-on-one discussions, workshops, forums and technical working groups.

Expedited rule changes

Under the expedited rule change process a final determination must be made within eight weeks of commencement of the rule change.⁵³ The Commission may expedite the rule making process if the request is for a non-controversial or urgent rule (these terms are defined in the NEL, NGL and NERL).⁵⁴ Under the expedited process there is only one round of written consultation on the rule change and no draft determination is made.

Figure 5.2: Expedited rule change process



Source: AEMC

Fast-tracked rule changes

The fast-tracked rule change process is nine weeks shorter than the standard process.

⁵³ Section 96 of the NEL, section 290 of the NGL and section 252 of the NERL.

⁵⁴ Section 87 of the NEL, section 290 of the NGL and section 235 of the NERL.

The rule making process can be fast tracked where there has been adequate previous public consultation on proposed rule changes by an energy market regulatory body or if the request arises from an AEMC review. Under the fast-track process there is a single opportunity for written submissions only.⁵⁵

Figure 5.3: Fast track rule change process



Source: AEMC

5.2 Submissions to the consultation paper

The Finkel review noted that there was "merit in trialling new regulatory approaches on a 'sand boxed' basis" and that the AEMC should be empowered to make "time limited rules".⁵⁶ The Commission's consultation paper noted that the ability of the Commission to make trial rule changes is limited.⁵⁷ The consultation paper posed a number of questions about the appropriate design and processes for a regulatory sandbox. Submissions and responses were comprehensively summarised in the Commission's interim advice.⁵⁸

Many submissions and responses were general in nature. Some stakeholder concerns also related to avoiding the complexity and cost of complying with the current regulatory arrangements. In the interim advice the Commission responded that, in most cases, the complexity of the regulatory arrangements and the costs of associated with compliance are likely to reflect the harm that the arrangements are aimed at preventing.⁵⁹

There were also a number of submissions that spoke directly to the issue and merit of trial rule changes.

LO3 energy, who are developing a platform for peer to peer trading, aggregation and dispatch, cited a need for changes to the market rules in order to, for example, test a multiple trading relationships concept.⁶⁰

AEMO said that "it is often not possible to conduct meaningful 'in-market' trials within the current rules, even with the agreement of the Australian Energy Regulator (AER) to issue letters of no action", and that "the ability to conduct trials will be critical to understand the extent to which these customers are impacted in terms of both regulatory and market

55 NEL section 96A, NGL section 305, NERL section 253.

56 Finkel, A. et al, *Independent review into the future security of the National Electricity Market*, June 2017, p.175.

57 AEMC, *Consultation paper, Regulatory sandbox arrangements to support proof-of-concept trials*, 20 December 2018, p.21.

58 AEMC, *Interim advice, Regulatory sandbox arrangements to support proof-of-concept trials*, 7 March 2019, pp.14-25.

59 AEMC, *Interim advice, Regulatory sandbox arrangements to support proof-of-concept trials*, 7 March 2019, p.21.

60 LO3 energy submission to the consultation paper, pp.1-2.

arrangements". AEMO then step through the example of a proposed in-market trial of aggregated demand response from distributed energy resources, which was intended to commence in July 2019.⁶¹ AEMO go on to say that "as well as providing scope for exemptions from requirements in the Rules, the sandbox framework will also need to have scope to incorporate new concepts."⁶²

Other stakeholders, such as Snowy Hydro, the Australian Energy Council and Origin Energy, saw limited need for a regulatory sandbox arrangement.⁶³

Some stakeholders cited the need to preserve consumer protections and established principles. For example, AGL raised concerns about the sandbox arrangements being used to bypass established principles in the regulatory framework, and considered that great care needs to be taken in relaxing regulatory restrictions on network businesses that would impact the viability of emerging competitive markets.⁶⁴ Other stakeholders suggested that the sandbox arrangements should not introduce undue complexity. For example, Mondo considered that the sandbox testing environment should be developed in a manner that does not impose undue administrative complexity,⁶⁵ and the Australian National University considered that sandbox arrangements should prioritise simplicity to be accessible to all users.⁶⁶

The Commission recognises the need to balance the benefits of expedition and simplicity against the benefits of analysis and consultation.

5.3 A new process for making a trial rule

It would be possible to deal with a time limited rule change proposal for the purpose of trialling an innovation under the standard rule change process. In some circumstances, where the proposed time limited rule is a non-controversial rule,⁶⁷ it may also be possible to deal with the rule change proposal as an expedited rule change. However, these processes may not be optimal for a trial rule.

The standard process is likely to be disproportionately long and resource intensive for a trial, unnecessarily diverting resources and potentially stifling innovation. An expedited process may be more proportionate, but the definition of a non-controversial rule doesn't reference duration. It could be that a rule will be unlikely to have a "*significant effect on the national electricity market*", but that this is ameliorated by the duration of the trial.

The Commission considers that a new rule change process may be appropriate for trial rules in order to provide a proportionate and timely outcome. The Commission also recognises that impacted parties, including impacted consumers competitors, should have an opportunity to comment on the proposal, either through a submission or objection. Other

61 AEMO submission to the consultation paper, pp.3-4.

62 AEMO submission to the consultation paper, p.7.

63 Submissions to the consultation paper: Snowy Hydro, p.1; Australian Energy Council, p.2; Origin Energy, p.1.

64 AGL submission to the consultation paper, pp.1-2.

65 Mondo submission to the consultation paper, p.2.

66 Australian National University, submission to the consultation paper, p.2.

67 as defined in section 87 of the NEL, section 290 of the NGL and section 235 of the NERL.

parties may also wish to join the trial. The Commission therefore considers that a process, similar to but in general shorter than, the expedited rule change process could apply as shown below. The trial rule change process can be shorter than the expedited process by including a consultation period that can be less than four weeks long. The Commission also considers that some trial rule changes may be complex and require more time than provided in the proposed process. In such cases, time extensions may be needed to conduct a trial rule change.

The trial rule making process is envisaged to encompass the NER, NERR and the NGR as innovative proof-of-concept may be impacted by the three set of rules. Extending the trial rule change process to cover all energy rules is expected to reduce regulatory barriers for innovation across the energy sector.

Figure 5.4: Potential trial rule change process



Source: AEMC

QUESTION 4: TRIAL RULE MAKING PROCESS

- (a) Is the proposed process necessary and appropriate for a trial rule change?
- (b) Should there be an opportunity to make submissions or for other prospective participants to join the trial? Why or why not?

QUESTION 5: NATIONAL GAS RULES

Do you agree that the trial rule making process should encompass the National Gas Rules? Why or why not?

5.3.1

What is the appropriate rule making test?

Under the NEL the Commission may only make a rule if it is satisfied that the rule will, or is likely to, contribute to the achievement of the national electricity objective (NEO).⁶⁸ This is the decision-making framework that the Commission must apply.

The NEO is:⁶⁹

⁶⁸ Section 88 of the NEL.

⁶⁹ Section 7 of the NEL.

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.

Under the NGL the Commission may only make a rule if it is satisfied that the rule will, or is likely to, contribute to the achievement of the national gas objective (NGO).⁷⁰ This is the decision-making framework that the Commission must apply.

The NGO is:⁷¹

to promote efficient investment in, and efficient operation and use of, natural gas services for the long term interests of consumers of natural gas with respect to price, safety, reliability and security of supply of natural gas.

Under the NERL the Commission may only make a rule if it is satisfied that the rule will, or is likely to, contribute to the achievement of the national energy retail objective (NERO).⁷² This is the decision-making framework that the Commission must apply.

The NERO is:⁷³

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 price, quality, safety, reliability and security of supply of energy.

The Commission must also, 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").⁷⁴

Where the consumer protections test is relevant in the making of a rule, the Commission must be satisfied that both the NERO test and the consumer protections test have been met.⁷⁵ If the Commission is satisfied that one test, but not the other, has been met, the rule cannot be made.

There may be some overlap in the application of the two tests. For example, a rule that provides a new protection for small customers may also, but will not necessarily, promote the NERO.

The Commission considers that the rule-making tests as they stand could also be fit for purpose when considering a trial rule change. The rule-making test would need to be applied to the trial itself, rather than the potential outcome of the trial, as the test will then be that undertaking the trial was in the long term interests of consumers because of potential

70 Section 291(1) of the NGL.

71 Section 23 of the NGL.

72 Section 236(1) of the NERL.

73 Section 13 of the NERL.

74 Section 236(2)(b) of the NERL.

75 That is, the legal tests set out in s. 236(1) and (2)(b) of the NERL.

benefits, even if the outcome of the trial is uncertain and the trial has potentially deleterious impacts. While some reservations were expressed in the consultation paper,⁷⁶ and in the interim advice⁷⁷ the Commission believes that the trial itself being in the long term interests of consumers remains the correct test.

QUESTION 6: RULE MAKING TESTS

Do you agree that the existing rule making tests are the most appropriate test for trial rule changes? Why or why not?

5.3.2

What is the procedure for lodging a trial rule change?

Under the national energy laws, the AEMC can generally make a rule change if and only if it receives a rule change request.⁷⁸ A rule change request can be from any person.⁷⁹

The same approach could continue to be used for trial rule changes or, alternatively, trial rule change proponents could be restricted to other market regulators, the AER and AEMO.

There may be advantages in restricting trial rule change proponents to the AER and AEMO. AER and AEMO are likely to have carefully considered whether other options, such as waivers, would facilitate a trial, and also have taken a view on the merits of the proposal. Restricting the rule change proponents to the AER and AEMO could also assist in discouraging forum shopping between regulators. However, it would also require the AER and AEMO as rule change proponents to commit resources and develop rule change proposals.

Continuing with the current approach, where any person can submit a rule change proposal, would forgo the benefits cited above but would also reduce barriers for trial proponents who need a rule change in order to conduct a trial. It would also mean that AEMO and the AER would not have to become involved as proponents in a rule change in which they may have no direct interest.

On balance the Commission's draft view is that the existing arrangement, where any person can submit a rule change proposal, is also fit for purpose for a trial rule change. As discussed later in section 5.4, the issue of forum shopping can be dealt with through preconditions requiring a rule change proponent to demonstrate that its proposed trial cannot be dealt with through an AER waiver or through AEMO procedures.

⁷⁶ AEMC, *Consultation paper, Regulatory sandbox arrangements to support proof-of-concept trials*, 20 December 2018, pp.21-22.

⁷⁷ AEMC, *Interim advice, Regulatory sandbox arrangements to support proof-of-concept trials*, 7 March 2019, p.12.

⁷⁸ There are minor exceptions - see NEL rule 91(2), NGL rule 295(2), NERL rule 243(2).

⁷⁹ NEL rule 91(1), NGL rule 295(1), NERL rule 243(1).

QUESTION 7: LODGING A TRIAL RULE CHANGE PROPOSAL

Do you agree with the Commission's draft recommendation that any person should be able to submit a trial rule change proposal? Why or why not?

5.4 Preconditions

Under the national energy laws, requests for rule changes must contain certain information.⁸⁰

Upon receipt of a rule change request the AEMC must determine whether the rule change request:⁸¹

- contains the information required above
- is not misconceived or lacking in substance
- is a matter on which the AEMC may make a rule under the national energy laws
- is not subject to a current or recent rule change request.

A rule change request not meeting the above criteria may be rejected.

If the rule change request meets the above criteria, then the AEMC must determine whether further information is required and, if so, request that information.⁸²

The Commission considers that the above criteria should also apply to trial rule change requests. However, further criteria are required.

A trial rule change is the most substantive option for facilitating a trial, and should therefore only be made if a trial is unable to be carried out in a reasonable manner, either under the existing rules or through the AER's proposed new waiver power. The Commission would expect a trial rule change proponent to demonstrate that this is the case, and would want the ability to reject a rule change request that did not, without having to consider the request further.

The Commission is required to have regard to revenue and pricing principles and policy principles when making rules.⁸³ There are no particular principles relating to trials or innovation. Ofgem's eligibility criteria for sandbox support includes a requirement that the proposal is genuinely innovative. According to Ofgem this "means that the product or service is not already being offered in the market or the business model being used to deliver the service or product is new and sufficiently different."⁸⁴ The Commission has considered whether a similar requirement or principle should apply to trial rule changes. On balance the Commission considers that innovation is a factor that would be taken into account when considering the proposed trial rule change against the national energy objectives. A trial that

80 NEL section 92, National electricity regulations section 8, NGL section 298, National gas regulations section 13, NERL section 246, National energy retail regulations section 11.

81 NEL section 94, NGL section 301, NERL section 249.

82 NEL section 94A, NGL section 302, NERL section 250.

83 NEL sections 7A(4)(b) and 8; NGL sections 24(4)(b) and 25; NERL section 14.

84 Ofgem, "What is a regulatory sandbox", last updated September 2018, p.2.

does not demonstrate genuine innovation is unlikely to be in the long term interests of consumers. Indeed, such a rule change proposal may be considered to be misconceived or lacking in substance.

As described in section 5.1.3, the expedited and fast track rule change rule making processes can only be applied in certain circumstances. Expedited rule changes can only be applied where the rule is non-controversial or urgent, while the fast-track process can only be used where there has been adequate previous public consultation on proposed rule changes by an energy market regulatory body or through an AEMC review. The Commission does not envisage that a trial rule change process would be available for matters that are not trials. The Commission considers that the trial rule change process should be restricted to a time limited trial, where the trial has a reasonable prospect of delivering a material benefit to consumers and where consideration of a permanent rule change would otherwise be hampered through inadequate information or experience.

If the proposal for broad discretion on waivers for the AER, as set out in the previous chapter, is maintained then the rule change process may seldom be used, as the vast majority of rule based trial impediments may be able to be dealt with using waivers. This also leads to a question about whether a trial rule change process is necessary at all. The Commission considers that it is because a waiver can only exempt a party from an obligation to comply with a rule. It cannot introduce a new rule in its place. In the Commission's opinion trial rule changes will be required where a new or alternate rule is needed in order to facilitate a trial.

QUESTION 8: RULE LODGEMENT PRECONDITIONS

Are the existing rule change request requirements appropriate? Should additional requirements, such as demonstrating that the trial cannot otherwise be carried out, be met prior to a rule change process commencing?

QUESTION 9: APPLICABILITY OF THE TRIAL RULE CHANGE PROCESS

Should the trial rule change process be restricted to a time limited trial, where the trial has a reasonable prospect of delivering a material benefit to consumers and where consideration of a permanent rule change would otherwise be hampered through inadequate information or experience? Why or why not?

5.5 Proposal scope and content

A key difference between a trial rule change and a normal rule change is that a trial rule change may not be general in nature. It may be made to facilitate a particular trial. The rule change could apply to only one party, in a manner analogous to a participant derogation, or it

could be applicable to a particular type of trial (e.g. stand-alone power systems type trials) and accessible to parties seeking to conduct relevant trials.⁸⁵ The Commission would therefore need to understand aspects of the trial itself in order to determine whether the trial rule change is in the long term interests of consumers. Aspects of a proposed trial that the Commission may be interested in include:

- the benefits of the trial and the innovation that it may lead to
- the reasons a trial rule change is needed in order to conduct the trial
- the impact of the trial on consumers and other market participants
- risks to consumers and other market participants
- evidence of the proponent's ability to conduct the trial in a professional and competent manner
- plans the proponent has to address impacts and risk
- proposed participant consent requirements
- proposed information sharing arrangements, including timing of information disclosure
- the trial closure process

The Commission therefore considers that the national energy laws should allow for rules to be made that set out information that the Commission may require a proponent to submit for a trial rule change. This will also allow the information requirements to evolve more rapidly as experience is gained.

QUESTION 10: TRIAL RULE SCOPE

Should a trial rule be restricted to a particular participant in a manner similar to participant derogations or should it be accessible to other parties conducting similar trials? Does it depend on the circumstances? Why or why not?

QUESTION 11: INFORMATION REQUIREMENTS

What additional information requirements should attach to the trial rule change process? Why?

5.6

Conditions

5.6.1

Conditions on the proponent

The Commission may also wish to impose conditions on the use of the trial rule change or the trial proponent. For example the trial rule may be restricted to being used by certain market participants in certain geographies, or the proponent may have to submit interim

⁸⁵ For example, NEL sections 2, 91(5), 92(2), 103(4), NER chapter 8A.

reports that provide confidence that the trial will proceed in the planned manner. Conditions would be contained within the rule itself. Compliance with the trial rule, including conditions would be the responsibility of the AER.

QUESTION 12: TRIAL RULE CHANGE CONDITIONS

Should the AEMC have the ability to impose conditions on the use of the trial rule and the trial proponent? Why or why not?

5.6.2 Terminating the trial rule change process

Rule drafting may not have been proposed, or the Commission may seek to make alterations or make a more preferable trial rule. However, there would be little point in making a trial rule for a particular proponent if the proponent was not going to utilise it. It may therefore be desirable to provide flexibility for the Commission or the proponent to terminate the process if it becomes apparent that the final form of the rule is unlikely to provide a sufficient benefit to the proponent such that the trial will proceed.

QUESTION 13: PROCESS TERMINATION

Should the Commission have the ability to terminate a trial rule change process that is in progress? If so, what criteria should apply?

5.6.3 Pathway to rule change

Trial proponents are likely to be interested in the pathway to a full rule change should a trial be successful. Generally, a specific rule change request would need to be submitted. Depending on the conditions set out in the law (e.g. NEL) the rule change could be conducted under the fast-track or expedited processes. The time allocated by the Commission for a trial rule may need to consider the time needed for a full rule change. The Commission should also have the option to extend the trial rule when a full rule change request is being considered.

QUESTION 14: PATHWAY TO RULE CHANGE

Do the current rule change process options (standard, fast-track and expedited) provide an appropriate pathway for successful trials to lead to full rule change? Is there another appropriate pathway for trials to lead to rule changes?

5.6.4

Fees

The Commission is funded by the various State and Territory jurisdictions. To ameliorate the impact of speculative trial rule change proposals the COAG Energy Council may wish to require payment of a fee to recover part or all of the cost of the rule change, particularly if a trial rule is made but the trial does not proceed, or does not proceed in accordance with the submission put to the Commission. Rule change requests can currently be subject to payment of a fee prescribed by the Regulations, although no fee is currently payable.⁸⁶

QUESTION 15: TRIAL RULE CHANGE FEES

Should the Commission recover some or all of its costs through a fee paid by trial rule change proponent?

5.7

Consumer protection - how will this be achieved under a trial rule change?

As discussed in the Commission's interim advice, consumers are expected to benefit from individual trials, or at least to not be made worse off. Technology or business models that would be likely to harm consumers' interests if implemented more widely should not have access to a regulatory sandbox.⁸⁷ However, a trial by its nature has an uncertain outcome. Further, there may be circumstances where a trial relies on the participation of a group of consumers, and where consumer protections could be temporarily reduced.

In the Commission's view the risk of even minor generally adverse consumer outcomes should be very low before a trial can proceed. Where consumers are part of a directly affected trial group that could potentially experience materially negative outcomes, then their explicit and informed consent should be obtained.

QUESTION 16: CONSUMER CONSENT REQUIREMENTS

Will consumer consent requirements unduly inhibit trials that may otherwise be worthwhile? If so, what alternative arrangements would be preferred and why?

⁸⁶ NEL section 92-92A, NGL section 298-299, NERL section 246-247.

⁸⁷ AEMC, Interim advice, *Regulatory sandbox arrangements to support proof-of-concept trials*, 7 March 2019, p.7.

6 LODGING A SUBMISSION

Written submissions on this draft report must be lodged with Commission by **8 August 2019** online via the Commission's website, www.aemc.gov.au, using the "lodge a submission" function and selecting the project reference code EPR0068.

The submission must be on letterhead (if submitted on behalf of an organisation), signed and dated.

Where practicable, submissions should be prepared in accordance with the Commission's guidelines for making written submissions. The Commission publishes all submissions on its website, subject to a claim of confidentiality.

All inquiries on this project should be addressed to Owen Pascoe on (02) 8296 7856 or owen.pascoe@aemc.gov.au.

ABBREVIATIONS

AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
ARENA	Australian Renewable Energy Agency
ARERA	Italian Regulatory Authority
ASIC Commission	Australian Securities and Investment Commission See AEMC
COAG	Council of Australian Governments
DEIP	Distributed energy integration program
ECA	Energy Consumers Australia
EMTPT	Energy Market Transformation Project Team
MCE	Ministerial Council on Energy
MTR	Multiple trading relationships
NEL	National Electricity Law
NEM	National electricity market
NEO	National electricity objective
NERL	National Energy Retail Law
NERO	National energy retail objective
NGL	National Gas Law
NGO	National gas objective
OFGEM	Office of Gas and Electricity Markets
SCO	Senior Committee of Officials