CONSUMER PROTECTIONS FOR FUTURE ENERGY SERVICES

DESIGNING OUT RISK

CUSTOMER INSIGHTS WORKSHOP REPORT

PREPARED FOR ENERGY SECURITY BOARD
AND THE AUSTRALIAN ENERGY REGULATOR

3 NOVEMBER 2022

Overview

The Australian Energy Regulator (AER) and Energy Security Board (ESB) invited stakeholders to take part in a full day workshop on 3 November 2022, to dive deeper into the consumer risk themes that have been identified during AER's Review of Consumer Protections for Future Energy Services. Stakeholders were asked to discuss the probability and materiality of the risks and the perceived responsibility of various energy bodies. This workshop built on engagement undertaken earlier in 2022 through AER consultation.

The key questions explored in the workshop were:

1. How likely is it that the identified consumer risk may occur when a consumer engages with a new energy product or service?
2. How will that risk materialise? For example, the degree of potential harm a product or service may present a consumer?
3. How can we categorise risks? Specially, what risks are already adequately controlled, should be accepted and what risks need to be mitigated.

The workshop used a range of tools to methodically work through these questions using four use cases from the Review of Consumer Protections for Future Energy Services. The use cases are referred to in the AER consultation paper were: using distributed energy resources (DER) in embedded networks; multiple provider model; electric vehicle (EV) charging; and energy management system.

Overall, 18 stakeholders participated, all in person. This included a diverse selection of stakeholders from consumer organisations, networks retailers, researchers, and technology providers.

This report documents the workshop outcomes and discussion as well as provides insights to inform the ongoing development of the project.

About Consumer Protections Reform

Since the introduction of the NECF there has been substantial investment by customers in CER such as rooftop solar, batteries, smart appliances and electric vehicles, and this is expected to continue. This is giving rise to the emergence of new energy products and services which can unlock the value of these CER assets for both customers and the energy system. AER's review of consumer protections for future energy services is considering how current issues with the authorisation and exemption frameworks are likely to be exacerbated in the energy market transition, how new energy services and products interact with the NECF and the essentiality of energy services to consumers, and what regulatory reforms may be required to ensure energy consumers continue to be adequately protected.

The need for this review was set out in the ESB's final advice to Energy Ministers in July 2021 as part of its Post 2025 market design reforms. National Cabinet endorsed the reforms set out in the final advice in October 2021. The advice provided recommendations across 4 key reform pathways to support a transitioning energy market, from one underpinned largely by coal fired generation to a market with more variable renewable energy.

One key pathway is Integrating CER and flexible demand which aims to effectively integrate CER into the National Electricity Market, with ESB analysis showing this could lead to $6.3 billion in benefits for consumers over the next 20 years. The 'Review of consumer protections for future energy services' is one of many projects being progressed under this pathway. The ESB is coordinating the activities under this reform pathway through the CER Implementation plan, which provides a three-year road setting out the technical, regulatory and market reforms required to integrate CER.

Additional material:

- Review of consumer protections for future energy services
- AER - Retailer authorisation and exemption review - Issues paper - April 2022
- AER - Review of consumer protections for future energy services - Options paper

Key customer insights

The workshop generated the following key insights:

- Regulate the **service**, not the **asset**. There needs to be a clear definition of what is to be covered by regulation and what is not.
- There should be **no consumer detriment** for being in an embedded network.
- **Simple and understandable** information is key for consumers to give informed consent.
- If a product or service can act to **impact or interrupt the supply of energy**, it should be regulated.
- Need to find the **right balance** between consumer protections and promoting market innovation.
- Consumers generally need **control** over their new energy products and services.
- Bodies must work together in the **best interests of the customer**.
- For all risks, the **responsibility** for enforcing industry standards and educating consumers rests on **government agencies**.

Approach

Workshop participants were divided into four groups, with each group assigned a use case. The workshop methodically progressed through a series of activities, with the use cases providing the context to explore, understand and develop customer-focused insights.

This approach included:

- **Understanding the opportunity**: The first activity sought to understand how the product or service currently services use case customers and how it meets the ESB customer objectives for the CER implementation plan.
- **Prioritising the possible risks**: Using their use case, participants were then asked to consider what the possible risks were, whether they should be controlled, mitigated, or accepted, and who should have responsibility for them.
- **Designing out the risks**: Using the risks they identified, participants then explored how they could be designed out and why this would be the right approach.
- **Assigning regulation cover**: Reflecting on their use case, participants then decided what should and shouldn't be covered by regulation and why.
- **Final recommendations**: Finally, participants provided recommendations to the AER team and discussed which principles should apply for future energy products and services.

Workshop tools

Groups were provided with use cases to support table discussion for each activity

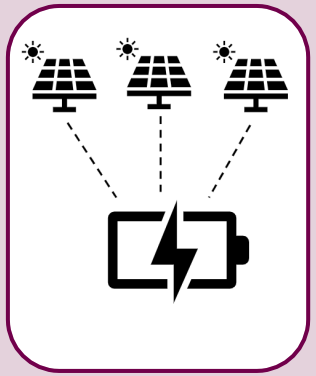
Use Case A – Using DER in embedded networks

Embedded networks may contain DER assets that are controlled and operated by the embedded network operator. For example, an apartment complex that is an embedded network could have a community battery.

The embedded network framework may also limit the opportunities apartment owners have to utilise their DER or flexible demand within the NEM. Some embedded networks may take the form of microgrids, where the embedded network owner may seek to optimise a range of

solar and battery resources on the embedded network and sell surplus energy into the grid.

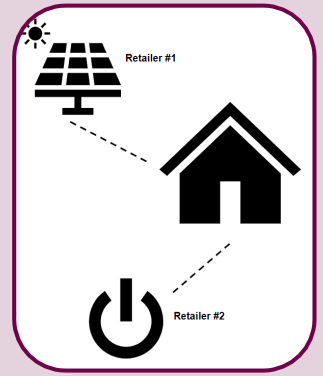
For our assessment, we propose to use a scenario of an apartment complex that is an embedded network with DER assets on site and manages how they are used.



Use Case B – Multiple provider model

Consumers may soon be able to have multiple energy providers at their premises, with each provider supplying a different type of energy service. For example, in one household there could be arrangements in place whereby: a retailer provides the supply of electricity an aggregator utilises the solar panels and battery on the premises to provide grid support services.

We note the multiple energy providers scenario may overlap with the aggregation and/or energy management services scenario. However, we will use the scenarios to draw out different issues.



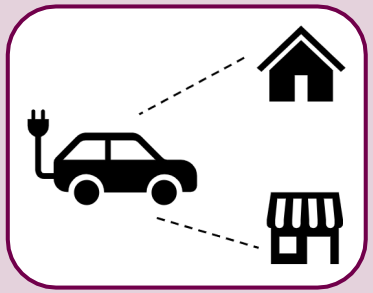
Workshop tools

Groups were provided with use cases to support table discussion for each activity

Use Case C – EV charging

EV charging can be broken down into two further scenarios:

1. Where an EV charging service provider sells electricity to the end customer at their premises (household or business) then this will likely be captured under the NECF
2. Where an EV charging service provider sells electricity to the end customer at a premises that the end customer does not own or occupy, this is unlikely to be captured by the NECF. Examples of this could be a streetside EV charger, office building or a service station.



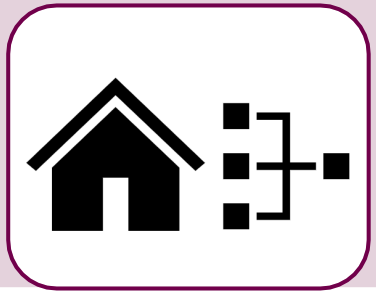
Use Case D – Energy management system

Aggregation services utilise behind the meter DER resources, smart devices, or a combination of both to manage energy usage at a premises and export of energy to the grid.

Aggregation can operate with an energy management service, or separately. Aggregators are already aggregating capacity from DER assets located at the premises of multiple end customers to provide ancillary services to NEM markets.

Energy management services can operate with aggregation services or independently. They work generally by using software to manage a

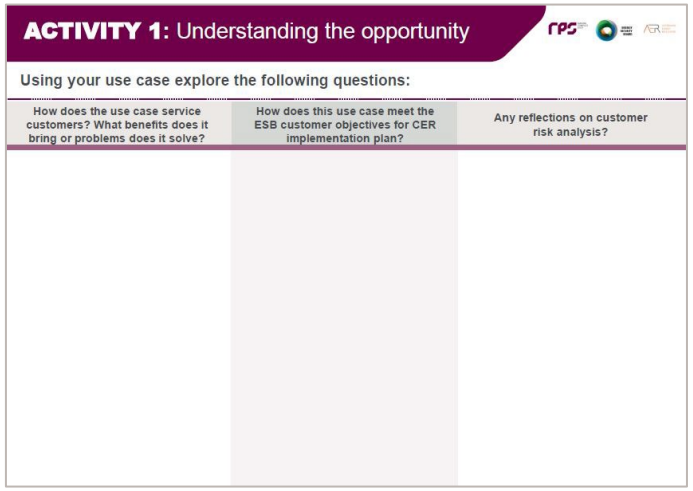
consumer's energy consumption. This can include turning devices on and off remotely, and/or setting devices to operate within certain rules or conditions. They can reduce energy consumption or optimise energy usage between DER located at a customer's premises and the electricity network, which may lead to bill savings for customers.

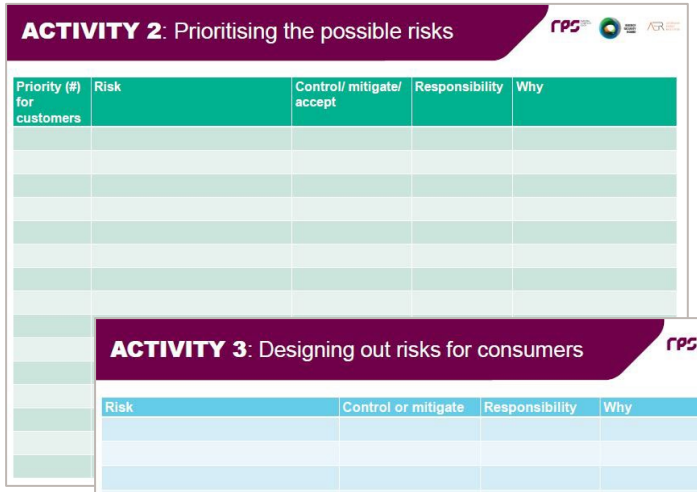


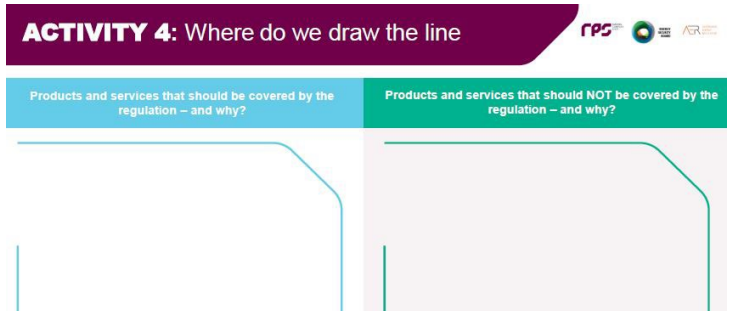
Workshop tools

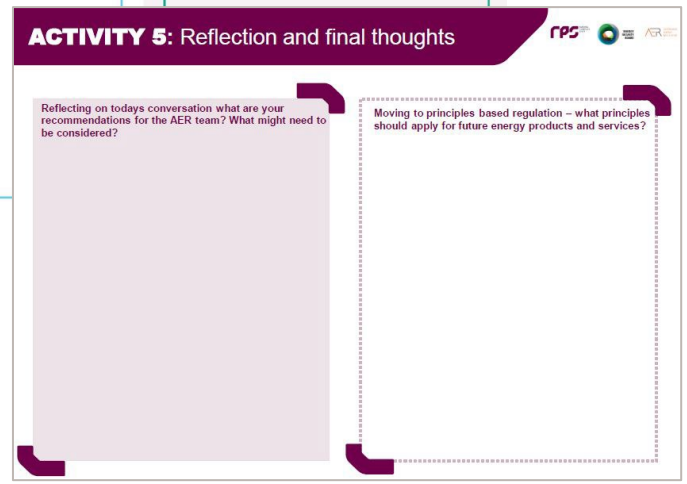
Activity Sheets

The workshop consisted of four focused activities to designed to generate customer insights. Each group received four activity sheets to support discussion and capture table feedback.









Understanding the opportunity for consumers

Using distributed energy resources (DER) in embedded networks

How does the use case service customers? What benefits and problems does it bring?

Benefits:

- Simplicity for customers.
- Embedded networks taking up consumer energy resources (CERs) can introduce customers to new technology.

Problems:

- No choice for customers – embedded network operators make the decisions on behalf of the customers, making them able to mandate that customers use a specific DER.
- Customers aren't able to have their own DER.

Does this use case meet the ESB customer objectives for the CER implementation plan? How so?

- No: There is limited choice or ability to access CER products or services.
- No: They have access to energy, however there is no guarantee that it is affordable as there is no competition.
- No: The current protections are not fit for purpose.

Do you have any reflections on the customer risk analysis?

- The group generally agreed with the identified risks.
- Using DER in embedded networks makes it more complex for the Ombudsman to address complaints for the embedded network customers.
- Limited hardship arrangements.
- No reconnection rights.

Questions raised

- What are the safety and installation risks?
- Are there more risks to household appliances if technical standards aren't the same?

Prioritising the probable risks

Using distributed energy resources (DER) in embedded networks

RISK	RESPONSIBILITY	RESPONSE	WHY THIS RESPONSE
Contracts	AER (for standard contracts)	Control	Controlling contracts through AER minimises disputes and makes it easier to communicate complex offers.
Control of assets		Control	Need customer consent to control assets.
Dispute resolution		Control	
Hardship		Control	Level playing field: all consumers should have access to hardship.
Information provision		Control	Clear info in standard format upfront – how does the consumer verify info?
Supplier failure		Control	More complex for RoLR to take over at an embedded network.
Data		Mitigate	Embedded network should not be allowed to sell or give data to third parties.
Poor conduct		Mitigate	
Reliability		Mitigate	Reliability terms should be in contract terms and conditions.
Access		Accept	Limited access to the CER is unavoidable living in an apartment, but other embedded networks (such as retirement villages) should allow access.
Appropriate technology standards		Accept	
Bundling		Accept	This is a low priority risk when hardship is available.

Key principle: there should be no consumer detriment for being in an embedded network

Designing out the material risks

Using distributed energy resources (DER) in embedded networks

RISK	RESPONSIBILITY	APPROACH	WHY THIS APPROACH
Contracts	AER/AEMC	Create standardised contracts for data, information provision, EDR, control of assets, and right of supply.	This approach ensures embedded network customers are not worse off than standard customers, provides the same protections to all embedded network customers, and in a sense acts as a default offer as they will be the minimum standards of embedded networks.
Control of assets		Terms on when a provider can and can't have control and override capability will be written into contracts. The types of terms needed will depend on the asset owner.	Ensures consumers can make informed decisions.
Dispute resolution	AER – standard contracts	Regulation on disputes and Ombudsman power to resolve CER disputes.	Access to low-cost and energy-specific EDR is necessary due to the power imbalance.
Hardship	AER	Some hardship provisions should apply regardless of whether you live in an embedded network.	Consumer protections should be the same in and out of embedded networks.
Information provision	AER	Create an infographic guideline on terms, and different categories of info depending on the source or type of product.	Would improve trust among consumers and could mitigate risks down the track.
Supplier failure		Difficult when there is infrastructure involved as the other supplier may not want to take over. When necessary RoLR can be applied.	

Understanding the opportunity for consumers

Multiple provider model

How does the use case service customers? What benefits and problems does it bring?

Benefits:

- Customers have access to choice around CER/revenue streams.
- Can access specialized aggregation and technology management.

Does this use case meet the ESB customer objectives for the CER implementation plan? How so?

- Yes: Promotes access.

Do you have any reflections on the customer risk analysis?

- In order to maximise consumer value, we need to ensure that providers work well together, such as through retailer/network information sharing. We could learn how to do this through the existing business-to-business (B2B) framework.
- In a sense, customers already deal with multiple providers (i.e., electricity, gas, and internet providers), and therefore are prepared for the MPM model.
- A key risk is the possibility of 'buck passing' between the providers, where neither provider takes responsibility for a problem, and instead blames the other.
- Moreover, the multiplicity itself may become a problem if it complicates the supply chain, creating new systems risks, particularly in relation to price, liability and warranty.

Questions raised

- Is customer value best unlocked through multiple providers or a single provider?
- Customers should be able to make an informed decision, so we need to ask ourselves what data and information do they need to make this choice?
- How can we balance system outcome with competition and data sharing?
- Is the multiple provider model worth the complexity?

Prioritising the probable risks

Multiple provider model

RISK	RESPONSIBILITY	RESPONSE	WHY THIS RESPONSE
Transparency and understanding	ACCC/AER	Control	Better consumer decisions and agency.
Coordination and optimisation		Control	
Interop tech	AEMC review	Control	
Lack of consumer protection	Industry	Control	
Data and privacy	OEC (Ombudsman authorised to apply) and Commonwealth Cyber Security Directorate	Control	
Cowboys	AER	Control	Priority as it affects whole of home/business.
Customer agency		Mitigate	
Buck passing		Mitigate	
System failure	Industry and ACCC product safety	Mitigate	
Poor customer service	Industry, peak bodies, Energy Charter, and NETCC	Mitigate	
Safety	Customer service providers	Mitigate	The right to repair under ACCC is necessary, but can cause problems when customers tinker with products. Customer service providers can all educate.
Lock-in and churn		Accept	

Designing out the material risks

Multiple provider model

RISK	RESPONSIBILITY	APPROACH	WHY THIS APPROACH
Poor quality installers	AER and CER (for solar panels only)	Establish an authorisation system to ensure product users are a fit and proper person; replace the current binary authorisation process with a nuanced penalty tool kit; establish an external dispute evaluation process; and expand CER's responsibility to include DERs beyond solar.	Stamping out poor quality installers will minimise other risks and create a competitive benefit of authorisations.
Contract transparency	NECF, ACL, and industry	Control through interactions with other CERs; improve sales practices with ACL regulation; industry modelling of terms and conditions; require authorisation to access DER and CER register; and establish core elements required for contracts.	
Coordination	AER – standard contracts	Extend current information sharing contracts or schemes; define new players and what needs to be shared in contracts, e.g., distribution code, state safety.	As shown in this example, a more comprehensive CER/DER register would mitigate many risks.
Data and privacy	OEC (Ombudsman authorised to apply) and Commonwealth Cyber Security Directorate	Expanding existing intra controls for networks to include new service providers; and a format that is intelligible/accessible.	
Customer change in circumstances	AER	Mitigate through a hardship policy.	A change in circumstances can increase a customer's vulnerability.

Understanding the opportunity for consumers

Electric vehicles (EV) charging

How does the use case service customers? What benefits and problems does it bring?

Benefits:

- The business has a low-price commercial electricity deal.
- Customers can shop around for charging, just as they would petrol.

Does this use case meet the ESB customer objectives for the CER implementation plan? How so?

- Yes: There is customer choice.
- No: It is a one-way service provision to the customer so there is no reward.
- No: There is only partial protection.

Do you have any reflections on the customer risk analysis?

- There are varying protections: NECF likely protects customers that charge their vehicles at their own premises, but not those using public chargers.
- Sales agent could be unable to explain the complexity of EV charging to customers. An info sheet which covers all the details could help promote understanding.
- There could be a lack of accessibility at public chargers.
- We need interoperability standards that consider comprehensive home energy management.

Questions raised

- Does the customer have to switch their entire home to the provider that they use for EV charging?
- Does the NECF enforce technical standards for EV charging providers?

Prioritising the probable risks

Electric vehicles (EV) charging

RISK	RESPONSIBILITY	RESPONSE	WHY THIS RESPONSE
Equity	Government	Control	EV strategy.
Safety	Government regulator	Control	Enforcement.
Data/privacy		Control	Use of charging information is a PV risk.
Information	Industry regulator	Mitigate	Knowledge and trust.
Jurisdiction	Government regulator	Mitigate	Cost, industry attraction, development and trust.
Choice	Government regulator, industry, and AEMC	Mitigate	Enforcement.
Dispute mechanisms	Regulator	Mitigate	Framework.
Reliability	Regulator and operator	Mitigate	It is a complex operational risk.
Compliance	Regulator (CER, AER or new entity)	Mitigate	Trust.
Control/agency	Industry	Accept	Sales and innovation.

Designing out the material risks

Electric vehicles (EV) charging

RISK	RESPONSIBILITY	APPROACH	WHY THIS APPROACH
Standards compliance (NER)		Control	We have to trust interoperability and controlling standards compliance (NER) will mitigate vertical monopolies.
Standards compliance (non-NER) V2G capable EVSE		Labelling documentation, e.g., green interoperability tick regarding grid security seal – this is a visual check which is easily recognisable.	Free market innovation and competition.

Key principle: For all risks, the responsibility for enforcing industry standards and educating consumers rests on government agencies

Understanding the opportunity for consumers

Energy management system

How does the use case service customers? What benefits and problems does it bring?

Benefits:

- Brings the bill down or removes it.
- Difference between cases of increasing value (aggregation; value other markets).
- Home energy management.
- Aggregation can bring benefits to the power system
- Customers can reduce the load when needed.
- Helps with affordability issues as it improves costs and reduces bill.

Does this use case meet the ESB customer objectives for the CER implementation plan? How so?

- Yes: Customers have access to supply.
- No: There may be gaps in protections.
- Yes: For home energy management systems there is a private contract with the controller.
- Yes: The agent is subject to AEMO power system.
- Yes: The retailer has NECF protection.

Prioritising the probable risks

Energy management system

RISK	RESPONSIBILITY	RESPONSE	WHY THIS RESPONSE
Contracts	ACL, NECF, and Ombudsman	Control	
Complexity	Supplier and Ombudsman	Mitigate	Education, rather than regulation, might be the way to go.
Loss of services	NECF and ACL	Mitigate	
Disputes		Mitigate	
Demarcation	ACL and NECF	Mitigate	
Service		Accept	

Designing out the material risks

Energy management system

RISK	RESPONSIBILITY	APPROACH	WHY THIS APPROACH
Contract take up	ACL, NECR, and Ombudsman	Regulate safety measures and insulator; ACL contracts; recourse through Ombudsman.	
Aggregation	AEMO and NECR	Loss of supply to appliances, disputes, questions of capability, and rehabilitation of systems should be partlycovered by NECR/AEMO.	Selling back to the market is an extra value to customers. Model -> aggregator -> market player -> AEMO/NER rules Model -> aggregator -> relationship with retailer
Using aggregation	NECR and ACL	Clarity of information and therefore consumer understanding can be improved through financial products and mandated fact sheets. This and the points described for the approach to aggregation can all be managed under NECR. An aggregator (as deemed by the text) can be authorised by the NECR. Loss of supply to appliances can also be managed by ACL.	
End of life warranties	ACL and general product laws	Establish product laws that ensure end of life warranties have regard for the customer.	
Working out which supplier to go with	ACL	Does ACL need to authorise?	

Regulation cover: in or out?

In

- Anything that has the ability to impact or interrupt the supply of energy to the consumer
- Anything controlled by a third party where decisions are being made by someone other than the consumer themselves
- Service providers, i.e., aggregators – those who manage 'flows' in and out
- Aggregator that sells and supplies into the market from controlling a consumer's CER
- Aggregator (under an EMS commercial arrangement) that controls the customer's devices where there may be a risk that appliances lose supply (such as if the bill isn't paid)
- EV charging at home as it is essential to the supply of the home and can be regulated by NECF, AER, and WECF
- Where there is active third-party control
- Service contract related to energy

Out

- HEMs
- Solar panels
- Pool pumps
- Electric vehicles
- Self-managed 'widgets'
- Products and services that have not existed for long
- Products and service that are not being sold on a large scale, as the impact is on only a small number of consumers
- Self-managed battery (battery as equipment NOT embedded in a service)
- An app relied on to manage a battery
- Public charging (ACCC): transparency of price at point of charge, e.g., dollars per kilowatt
- Consumer managing their own CER through devices, including charging stations (EVSE)

Common risks across all use cases

After reviewing all of the use cases, outlined below are the most common residual risks that could materialise and potentially require additional controls to be considered as part of the ongoing development of reforms.

RISK	RESPONSIBILITY	DETAILS
Contracts	AER/AEMC	Controlling contracts through AER minimises disputes and makes it easier to communicate complex offers.
Control of assets	Industry	Need customer consent to control assets.
Loss of services	NECF and ACL	
Dispute resolution	AER	Access to low-cost and energy-specific EDR is necessary due to the power imbalance.
Information provision	AER	Clear info in standard format upfront – how does the consumer verify info?
Supplier failure	Industry and ACCC	More complex for Retailer of Last Resort (RoLR) to take over at an embedded network.
Data and privacy	OEC and Commonwealth Cyber Security Directorate	Embedded network should not be allowed to sell or give data to third parties.
Reliability		Reliability terms should be in contract terms and conditions.
Safety	Customer service providers and government regulators	The right to repair under ACCC is necessary, but can cause problems when customers tinker with products. Customer service providers can all educate.

Moving to principles-based regulation

Participants shared their expectations of the principles that should be applied to regulation for future energy products and services in order to protect consumers and also enable innovation.

- There should be no consumer detriment for being in an embedded network.
- Simple and understandable information is key for consumers to give informed consent.
- If it has the ability to have supply to it cut off, it should be regulated.
- Generally, consumers need control over their new energy products and services.
- Bodies must work together in the best interests of the customer.
- Flexible options for changes in circumstances and vulnerability.
- Work to promote customer understanding.
- Implement positive authorisation systems rather than exemptions.
- Demonstrating you are fit and proper person is vital.
- Transparency at the point of interaction, particularly at the point of sale
- Price visibility.
- Competitive neutrality.
- Complaints management systems for redress.
- Avoiding the ‘kit’ asset.
- To move to principles-based long term there must be rule changes, greater regulation, minister decision, and change of jurisdiction, meaning it will probably be 5-10 years down the track.
- Establish the principles-based model under NECF.
- Refiltration of compliance technology standards.

Final participant thoughts for the AER team

Participants provided final recommendations for the AER reform team to consider.

- Energy specific consumer protection cover: define what is *in* and what is *out.*
  - Focus on the service, not the asset.
  - Focus on services which impact the flow of electricity in and out of the home/business.
- Features of energy-specific consumer protection should include
  - Licencing should be risk-based and there should be appropriate penalties for non-compliance.
  - Consider ways to standardise contracts to reduce complexity for customers. This could be principles-based such as for ‘one notification’ for customer communications where multiple parties may seek to engage with the customer around events.
  - Establish minimum information provision requirements such as a fact sheets with standardised information that must be provided to the customer in advertising, point of sale and beyond.
- In an increasingly complex market, access to energy-specific independent dispute resolution is critical.

Recommendations

Following the workshop, further synthesis was conducted to consider what was heard from participants and how the reform team could apply these customer insights into the ongoing development process.

- **Striking the right balance** between regulation that protects consumer while also driving innovation requires a clear definition of what is included in the reform and what is not. Further consideration is required using stakeholder feedback to develop a definition, or set of criteria that can be applied.
- **Dispute resolution is generally ambiguous** and needs to be defined in the reform to provide consumers with certainty of where to go for help if something goes wrong.
- **Transparent and easy to access information** is vital for all new future energy products and services that may be covered by this reform. Consumers should be assured that approved products and service will provide transparent, easy to access information to make informed decisions. New energy providers of new products and services should be required to provide information and communicate potential risks
- **Engagement with providers and installers** may shed additional light on the right balance between consumer protections and innovation. Consideration for existing consumer protections such as Australian Consumer Law (ACL) and Australian Standards should provide adequate provisions that do not need to be repeated in this reform and also make it simple for providers to meet.
- **The ESB Consumer Risk Assessment Tool** can be further refined using feedback from this process to better support market bodies and reform initiatives to understand, evaluate and respond to consumer risks and opportunities. The intended role of this tool was to support the application of consumer risks to ensure adequate protections were included and that consumer outcomes were delivered by the reform.