mosaicLAB

ENERGY REFERENCE GROUP

Jemena electricity networks

CONSOLIDATED REPORT

May 2024

CONTENTS

Introduction

Overview

In October 2023 Jemena set up a ten-member Energy Reference Group (ERG) to help shape its next regulatory proposal. The proposal will outline Jemena's plans for the upcoming regulatory period, the five years from 1 July 2026 to 30 June 2031 (next regulatory period) and how it expects to fund them.

ERG membership was invited from across various industry, commercial, academic and government sectors. Members included:

- Andrew Richards, Chief Executive Officer, Energy Users Association of Australia
- Gavin Dufty, Executive Manager, Policy and Research, St Vincent de Paul
- Kate Hansen, Chief Operating Officer, CarbonLite
- Kellie Larson, Director Verve Strategic Consulting
- Lynda Osborne, GM Global Strategy, Technology, Xero
- Morely Muse (Dr), Co-Founder and Director, iSTEM
- Neil Watt, Network Strategy Adviser
- Ruchika Deora, Program Director, C4NET
- Ruth Harland, Utilities Officer Maribyrnong & Moonee Valley Councils
- Tim Callaghan, GM Strategic Initiatives, Victorian Chamber Commerce and Industry

Purpose

The energy reference group was established as an expert energy panel that could help discuss and deliberate on complex issues and provide clear, independent advice and recommendations that have the long-term interests of customers in mind. Members were appointed by Jemena to advise Jemena on its Pricing Reset 2026-2031 to the ERG on the understanding it was an advisory body not a decision-making body.

Throughout the engagement process ERG members were asked to keep the macro challenge in mind:

'How should Jemena prepare for a sustainable energy future while meeting customer and community needs today?'

To support them in participating fully, ERG members were provided with a Welcome Pack outlining an overview of:

- How the electricity supply chain works
- Jemena's electricity network (operating environment and asset overview)
- The energy market (current and long-term megatrends)
- Jemena's Customer base
- The Regulatory context
- The Engagement program
- The Energy Reference Group Members

PROCESS

In a mix of in person and online facilitated sessions, ERG members were invited to provide advice, perspectives and recommendations on a range of topics and challenges that Jemena might face as an electricity distribution business.

An overview of the focus areas for each ERG session is contained in the table below.

Date	Session	Session Overview	Time
4/10/2023	Social: Meet & greet	▪ Jemena to welcome and acknowledge ERG members ▪ ERG members to meet and connect ▪ ERG to hear briefly about the approach to the JEN regulatory price reset	1.5hrs in person
25/10/2023	#1	▪ Reconnecting	

Date	Session	Session Overview	Time
		▪ Our Customer Voice Group insights - what we've hear so far & what that means for Jemena ▪ Ways of Working & Thinking together – exploring our social styles & group agreements ▪ Hearing from Jemena about its long-term vision & strategic direction ▪ Sharing Insights & implications based on the Pre-reading Paper: Moving to a Sustainable Future ▪ Prioritising focus areas for future ERG Meetings	3hrs in person
8/11/2023	#2	▪ Managing Director's Welcome ▪ Our Peoples Panel Meet & Greet Insights ▪ CVG Reflections ▪ Remit Reminder & Proce Reset Overview ▪ Network Performance & Risk Management including: o T1. Network performance & reliability o T2. Environment including SF6 gas o T3. Cyber security and data o T4. Bushfire risk, mitigations and insurance o T5. Grid stability and risk identification ▪ Risk Mitigation Priorities: Given the remit: How should Jemena prepare for a sustainable energy future while meeting customer and community needs today? How might Jemena prioritise its risk mitigation?	3hrs online
22/11/2023	#3	▪ Reconnect & Reflect ▪ Our Peoples Panel Meet & Greet Insights ▪ Round the grounds with the Customer Voice Groups – what are we gleaning from these sessions? ▪ The challenges and opportunities with grid stability ▪ Working with the mega trends, we will discuss how the market needs to reform and Jemena's response.	3 hrs online
13/12/2023	#4	▪ Reflections – what we've heard from ERG members so far ▪ Deep dive into Export & Import Conundrums	3 hrs in person
14/02/2024	#5	▪ Reconnecting in person	3 hrs in person

Date	Session	Session Overview	Time
		▪ Seeking your input on our proposed approach to engaging customers on trade-offs ▪ Taking a deeper dive into tariffs and our next Tariff Structure Statement - including design principles & ideas ▪ Helping Jemena balance competing expectations on tariff from a customer perspective and from a Vic DB perspective	
21/02/2024	#5.5	▪ Explore Customer Trade-Offs & how to equip the Jemena People's Panel to engage about this ▪ Respond to questions from the Jemena People's Panel Day 2 session	1.5 hours online
14/03/2024	#6	▪ Reconnecting in person ▪ Deep dive into Future Grid Strategy and Digitisation	3hrs in person
17/04/2024	#7	▪ Consider the Jemena People's Panel draft recommendations ▪ Meet with panel representatives & hear about the intentions behind the recommendations ▪ Provide insights & considerations for Panel reps to take back to Day 5 People's Panel on 20 April 2024 ▪ Provide perspectives to Jemena about the draft recommendations and their potential implications for Jemena's consideration	3 hrs online

HOW TO NAVIGATE THIS CONSOLIDATED REPORT

ERG member perspectives and insights were gathered across a series of ERG meetings, through a mix of in person and online facilitated engagement activities. The report should be read in conjunction with Jemena Electricity Network's:

- Energy reference group welcome pack
- ERG Meeting Papers #1 to #6
- Draft People's Panel Recommendations Report as at Day 4 of the Panel process.

This consolidated report contains a summary of 'What Was Said' across the Energy Reference Group (ERG) sessions. The purpose of a What Was Said is to present back participants comments, reflections, insights or advice in their own words as captured during session activities and discussions. It is not intended to be a verbatim transcript of each session.

At various points through the series of sessions, ERG members were provided with summaries of their outputs, and those are consolidated into this overall What Was Said Report.

Where large volumes of activity data were generated, the raw data has been included in appendices and a summary of themes presented in the body of the What Was Said. It is important to note that any summaries have been prepared by the Author (Facilitator) who is not a subject matter expert. Any such summaries reflect the author's best efforts to accurately represent the raw data and any errors in translation are those of the author.

Energy Reference Group #1 to #3

SUMMARY OF WHAT HAVE WE HEARD SO FAR

The focus of the first few ERG sessions was to:

- come together as a group and understand each other's respective backgrounds
- hear from Jemena about its role as a Distribution Business
- understand the context of the Energy transition

ERG sessions usually closed with an individual reflection about the session based on what the person liked about the session, what they may still wish for or be left wondering about. One of the comments in the Like / Wish / Wonder (LWW) reflection activity at ERG # 3 was a query about:

'Concrete take aways for the Jemena Group?' (ERG # 3 LWW)

ERG member comments from ERG session #1, # 2 and # 3 have been considered and are reflected below under the broad themes of:

- Process
- Outcomes for Customers
- Customer – communication / engagement & education
- Where to act (Jemena's role)
- Where to influence (Jemena advocacy)
- Distributor challenges (acknowledgement of)
- Topic specific advice (to respond to remit)
- Outstanding questions (derived from activities not from the Q and A sessions)

For each topic there is an "In summary" comment that captures the overall intent of ERG member feedback. Participant comments are contained in **Appendix A** where they are listed as bullet points to support that summary comment. Please note any summary comments are the interpretation of the authors (facilitators).

Process

In summary it is a good process, people are well engaged and would like more time to deep dive into the detail of topics with support from Jemena. There is deep curiosity about how ERG inputs will intersect with other engagement activities, and how they'll influence Jemena's proposal.

Outcomes for customers

In summary there is a strong ERG focus on the links between communication, information, service delivery and trust for Jemena to be able to provide good outcomes for customers; particularly the more vulnerable.

Customer – communication / engagement & education

In summary ERG see effective customer communication and engagement as critical to a successful energy transition.

Where to act (Jemena's role)

In summary Jemena has to determine its role in the supply chain, where it has control and where it can influence; and its focus should be on service design and delivery.

Where to influence (Jemena's advocacy)

In summary Jemena has opportunities to influence customer behaviour, and how retailers engage with those same customers. Jemena also has a key advocacy role on behalf of customers in its interaction with the government and other market players.

Distributor challenges

In summary Jemena may need to consider expanding its regulated role to provide good customer outcomes in a volatile market where consumer behaviour change is needed.

Topic specific advice:

- **Learning from others** - In summary, continue benchmarking what others have done; learning from what worked well and what hasn't worked so well.
- **Network Performance & Reliability** - In summary, in addition to risk mitigation, investment prioritisation to be based on reliability trends, awareness of impacts and consultation with affected customers.
- **Environmental factors** - In summary promote sustainability using commercially viable products.
- **Cyber security & data access** - In summary, allocate budget to improve cyber-security and consider how to balance customer needs for access to information within a well-coordinated and flexible risk management framework.
- **Bushfire risk & mitigation (incl. insurance)** - In summary bushfire recovery costs should be spread equitably and the focus should be more on mitigating the risks of electricity infrastructure as ignition sources through affordable, and where possible shared cost solutions; recognising this will occur in the context of competing priorities at a local government level to balance bushfire protection and increased canopy cover.
- **Grid Stability** - In summary, at a network level, consider learning from and working with other DNSPs and EV suppliers. Also consider the benefits of customer level solutions to grid stability through battery storage technology and time of day use.
- **Prioritising Risk Mitigation** - In summary, address risks wholistically and proportionally, with consideration of unique customer goals; focusing on improving social licence through an opportunity and value adding lens rather than a risk lens. Acknowledge the tension of balancing ideal (moral) outcome vs operational risk management, especially in relation environmental risks.

- **Market trends** - In summary, market trends can influence decisions; how can the market be influenced to support: emission reductions, low voltage distribution, orchestration and battery storage?
- **Forecasting** - In summary, forecasting requires consideration of well-informed assumptions about consumer behaviour and adoption of new technology in an ever-shifting policy context.

Potentially Outstanding Questions

In summary, there is much for Jemena to consider:

- Role related questions
- Investment and funding related questions
- Government and Stakeholder related questions
- Network Operation & Performance related questions
- Risk management related questions
- Incentives & tariffs related questions
- Equity & fairness related questions
- Market trend related questions

Energy Reference Group #4

MosaicLab facilitators Keith Greaves and Belinda Lowing co-facilitated Jemena's fourth Energy Reference Group meeting at Jemena Corporate HQ on Wednesday 13 December 2023. The purpose of the session was to reconnect and deep dive into levers to support the (electricity) network through a lens of fairness and equity.

CONTEXT

The fourth ERG session commenced with a prompt for small groups to share 'What's top of mind coming into the session?'. Responses included

- Let's explore what is it Jemena want to do / what role they play
- What role can Jemena play in helping to rest roles / market
- We need to keep in mind behaviour change of consumers
- We may not know lots, but we are clear on what we need to know....& tell others!
- We want to keep an open mind & explore lots of different views

In response to ERG member feedback from previous sessions, this session was designed to enable participants to deep dive into the nuances of the Export & Import Conundrums highlighted in the pre-reading paper and explore options for Jemena in relation to allocations. Participants were advised they'd all be examining the Pros, Cons and possible middle ground opportunities for each of the following topics and options:

PROCESS

FACT CHECK

To prepare for their deep dive, participants were given 15 minutes to ask a Jemena 'Techspert' for any additional information that would aid their exploration of the topics and options. Techsperts were asked to capture who was requesting the information and what data needed to be provided or checked. Then, in a Techspert huddle, information and guidance that Jemena could offer was captured so it could be provided back to the Individual who had raised the question. This information is contained in **Appendix B** in a FACT CHECK table.

HUDDLE & PREP!

ERG members were tasked with providing as many possible pros and cons for the different options for both the import and export topics.

For exports, in smaller groups, members were asked to identify pros and cons for the following two options:

- Option 1: When allocating limited export capacity, Jemena should apply a “first come first serve” approach.
- Option 2: When allocating limited export capacity, Jemena should not apply a "first come first serve” approach.

For imports, in smaller groups, members were asked to identify pros (a good idea because...) and cons (a bad idea because..) for the following two options:

- Option 1: Jemena should place an import limit on the allocation of controllable loads.
- Option 2: Jemena should not place an import limit on the allocation of controllable loads.

A summary of the pros and cons is presented below. The full range of pros and cons for all four options are contained in tables in **Appendix B**:

Topic 1 Export conundrum - Option 1:

When allocating limited export capacity, Jemena ***should*** apply a “first come first serve” approach.

- In summary, this is a good idea because of its simplicity, fairness to early investors, and its ability to maintain grid stability while encouraging a swift and cost-effective transition to renewable energy systems.
- In summary: this is a bad idea because there are concerns about the efficiency of older solar PV, lack of fairness for future customers, and limits to return on investment.

Topic 1 Export conundrum - Option 2:

When allocating limited export capacity, Jemena ***should not*** apply a “first come first serve” approach.

- In summary: this is a good idea because it fosters a fairer, more inclusive approach to encouraging investment in solar technology without barriers to adoption or deployment.
- In summary this is a bad idea because it could slow the uptake of solar transition to renewable energy, it may affect grid stability and pricing, and create perceptions of inequity across different consumer groups.

Topic 2 Import conundrum - Option 1:

Jemena should place an import limit on the allocation of controllable loads.

In summary this is a good idea because it may reduce traditional infrastructure costs and increase consumer awareness about load sharing thereby promoting more mindful consumption behaviours, as well as support better orchestration of community energy resources.

In summary this is a bad idea because it may create demand anxiety and reduce trust, delay electrification and unfairly affect those who can't control loads or who are more vulnerable due to high reliance on daytime usage.

Topic 2 Import conundrum - Option 2:

Jemena ***should not*** place an import limit on the allocation of controllable loads.

- In summary this is a good idea because it aligns with consumer expectations for uninterrupted access to electricity, supports broader adoption of modern technologies, enhances trust and satisfaction among consumers, and encourages fair market price and technological innovations.
- In summary this is a bad idea because consumer behaviour is unpredictable, the import limit may lead to increased infrastructure costs, affect system security, and limit equitable access to energy resources.

COMMIT & CAPTURE!

Once each group had generated all the pros and cons for each option (across the two topics) they were set a challenge to select their one or two absolutely 'killer' reasons why they would support the option (pros), and one or two reasons why they would 'kill' that option (cons).

Topic 1 – Export conundrum

OPTION 1 - When allocating limited export capacity, Jemena should apply a "first come first serve" approach.		**OPTION 2 - When allocating limited export capacity, Jemena should not apply a "first come first serve" approach.**	
PRO (A good idea because…)	**CON (A bad idea because…)**	**PRO (A good idea because…)**	**CON (A bad idea because…)**
Exports Rationale: Avoids conditions of curtailment	Encourages retention of less efficient solar PV. Rationale: Older solar is smaller and less efficient / Discourages upgrades	Continue to encourage investment in solar Rationale: Will continue to encourage people to invest in solar as it will be a level playing field.	Exports Rationale: Impacts our ability to achieve net zero
Should apply "First come first served" Rationale: It encourages uptake relatively quickly for the transition	Disincentivises new investment Rationale: May result in lower uptake of solar PV / Reduces ROI for future customers / May reduce overall levels of export / production	Exports Rationale: Allows for continued deployment of rooftop PV	Should NOT apply "First come first served" Rationale: Could make wholesale power prices stay higher for longer (if CER uptake is flawed (delayed)
Fair to those already invested Rationale: Will receive their expected ROI at time of investment. / Rewards first movers.	Should apply "First come first served" Rationale: Energy not allocated from some pro-consumers will be dissipated into the environment as waste heat, adding to the problem of global warming and climate change./ How do you deal with the concept of fairness for vulnerable groups?	Generational equity Rationale: Perception in market that baby boomers and gen X benefits verses gen y / z / Keeps it equitable between generations.	Penalised after investment Rationale: Older / established customers would feel aggrieved about being penalised after their investment.

OPTION 1 - When allocating limited export capacity, Jemena <u>should</u> apply a "first come first serve" approach.		OPTION 2 - When allocating limited export capacity, Jemena <u>should not</u> apply a "first come first serve" approach.	
Simplest process Rationale: Easy to understand and easier to manage for Jemena / No further changes or retrofit costs to existing systems.	Exports Rationale: Curtails uptake of additional capacity	Exports Rationale: Spreads the value of existing capacity to all customers.	Exports Rationale: Impacts voltage and quality of supply for customers
Exports Rationale: Could encourage self-consumption.	Exports Rationale: Cements inequality	Should NOT apply "First come first served" Rationale: It is fairer for vulnerable customers who may not be able to adopt early.	

Topic 2 – Import conundrum

OPTION 1 - Jemena should place an import limit on the allocation of controllable loads		OPTION 2 - Jemena should not place an import limit on the allocation of controllable loads	
PRO (A good idea because…)	**CON (A bad idea because …**	**PRO (A good idea because…)**	**CON (A bad idea because…)**
More efficient appliances Rationale: Encourages innovation and uptake of more efficient appliances.	Demand anxiety Rationale: Similar to EV range anxiety./ Discourages consumers to switch to electrification options / stay on gas (industrial and households)	Should not place import limit Rationale: Encourages more innovation in orchestration and tariffs to give individuals more choice and more tailored energy services.	Imports Rationale: Near term impact on the network and system security as we don't know enough about consumer behaviour / How would this be done equitably?
Mindful consumption Rationale: Makes customers change behaviours and be mindful about how and when they use energy.	Import – should place a limit Rationale: Customers don't want to be controlled – issue of trust / May deter customers from adopting consumer energy resources. E.g. EV's	Supports energy transitions Rationale: Supports / provides customer assurance to invest in EV's, induction, heat pumps etc	Won't change behaviours Rationale: Customers won't be incentivised to invest in efficiencies or change their toll behaviours
Should place import limit Rationale: Can be good for system stability by partially resolving export conundrum by encouraging imports and exports at certain times	Imports Rationale: Health impact of curtailing A/C	Meets community / customer expectations Rationale: – Electricity is expected to be available at all times and convenient.	Imports Rationale: – May result in material overspend (build of distribution network and energy generation)

OPTION 1 - Jemena should place an import limit on the allocation of controllable loads		OPTION 2 - Jemena should not place an import limit on the allocation of controllable loads	
Imports Rationale: Encourage load shifting for better orchestration of CER	Imports Rationale: Disproportionately impacts vulnerable customers	Imports Rationale: Encourages technology adoption	Imports Rationale: Doesn't take into account management conditions as against Y / N limits
Imports Rationale: It spreads load to lower operational costs for all	Uncontrolled loads Rationale: Needs may not be controllable / discretionary – special needs, disability requirements etc / Industrial variable loads – can't just shift to out of peak hours	Imports Rationale: Relies upon the market to establish a "fair" price	Imports Rationale: Reinforces current system problems

WALK & TALK!

Four small groups, mixing Jemena staff & ERG members, were created. These small groups participated in a working lunch conversation in response to: "What are your 3 INSIGHTS about what all this is telling us about the options Jemena could take forward to ensure a fair / equitable approach to import and export limits?"

GROUP	HEADING	A SHARED INSIGHT FROM OUR GROUP DISCUSSION
One	**Timing of equity**	It's important to consider equity for the future and not just now
	Behavioural incentives	Incentives preferred to rules, with trust being imperative
	Grandfathering	Conditions on new connections to favour zero carbon rather than just more solar aka orchestrated CER
Two	**Shared orchestration of CER (moving to)**	Beneficial to everyone More stable network Long term benefits
	Community big picture of orchestration and load control	Explain long term benefits and communications. Communicating why need for change
	Present options to customers	Give customers trade offs
Three	**Planet**	As much contribution to the energy transition as possible as soon as possible Use up as much capacity as possible first – Society benefits Panel verses access cost cancel out over time / possible
	Community	Protect vulnerable Momentum to motivate the masses – Society benefits Pace of EV change
	People / individuals	Empowering education and access What's in it for me?

GROUP	HEADING	A SHARED INSIGHT FROM OUR GROUP DISCUSSION
Four	**First come first serve**	Without the baseline / benchmark of what Jemena should allow to export, it's difficult to determine what fairness and equity is to each customer
	Export and import	What level of orchestration helps us achieve our climate targets as quickly as possible?
	Service Levels	What is the baseline level of service in the new energy paradigm?

CLOSING COMMENTS

Below are final comments from this ERG group regarding the prompt – 'how did we do today?'

- Went really well - we unpacked lots of nuance.
- Jemena are doing this really well and working beyond the spectrum.
- Structure of deep dive worked well and stopped us going down a hole.

Energy Reference Group # 5

MosaicLab facilitators Keith Greaves and Belinda Lowing co-facilitated Jemena's fifth Energy Reference Group meeting at Jemena Corporate HQ on Wednesday 14 February 2024. The purpose of the session was to reconnect in real life and deep dive into trade-offs and tariff structures and design principles.

LAYERED TRADE-OFFS – YOUR ADVICE TO JEMENA

In response to ERG session 4 Jemena prepared the following table to outline initiatives it could pursue to target some of the identified priorities.

Priority	What are some of the initiatives we could pursue to target this 'priority'	Trade off
Planet (focuses on environmental outcomes; less about cost)	**Preference policies and investments to promote renewable generations** - Rebalance tariffs to incentivise grid export - Do not introduce grid export tariff - Amend the connection policies to preference large, embedded generation - Release spare hosting capacity as quickly as possible - Build more export capability **Pursue low environmental footprint work practices** - [TBA – not sure there is anything left] **Pursue low environmental impact procurement practices** Stop the purchase of electrical equipment that contain SF6 gas, "reduce network losses by purchase only low loss transformers. **More aggressive pursuits in 'trial activities'**	- those unable to export will bear the cost burden - as above - existing customers pay for connecting generators - slow adopters will pay to connect / planet benefits are delayed - costly and may not get taken up - potential higher cost for all customers - potential higher cost for all customers - customers bear the cost of R&D with no guarantee of benefits
Community (focuses on equity)	**Pursue modern slavery policies*** **Increase equity in pricing structures and levels** - Accelerate cost-reflective pricing to charge customers for what they use - Introduce grid export tariffs to charge customers for what they use **To the extent possible – relax policies to reduce total costs for all^**	- Customer may not be able to manage the bill impacts (+ or -) - Disincentivises promoting 'planet priority' - Goes against 'good engineering practice' principles and defers costs and increases risk - Technology adoption come with risk

Priority	What are some of the initiatives we could pursue to target this 'priority'	Trade off
	Preference digitising the grid over building – increases utilisation and lowers total cost - Backstop mechanism - Flexible export capability	
Individual (focuses on maximising the benefits for those that can pay)	**Preference policies and investments to promote renewable generations** - Rebalance tariffs to incentivise grid export - Do not introduce a grid export tariff	- those unable to export will bear the cost burden - as above

Given this information as well as the context provided by Matt Serpell from Jemena, participants were asked:

- What if any gaps are there in this table?
- How do we make this concept of 'layered trade-offs' accessible to our customers to discuss?

Gaps In the Table

In response to the first question, participants identified gaps in the table and outlined why these gaps were important for Jemena to address. Participant comments are contained in tables in **Appendix C**. The priorities for addressing these gaps have been summarised below as:

PLANET

- **Stakeholder Alignment and Technical Challenges**: Focus on aligning stakeholders for energy solutions in constrained urban spaces, and the technical support for managing day-to-day energy loads without overconsumption.
- **Incentives and Consistency:** Advocate for governmental subsidies to lower costs related to grid exports and battery investments, ensuring tariff consistency across all DNSPs.
- **Clear Benefits and Regulation Compliance**: Emphasize clearer customer benefits linked to long-term planetary health and adherence to regulations during trial activities.

COMMUNITY

- **Cost Education and Engagement:** Conduct more sessions to educate the community on cost implications and gather feedback to address concerns effectively.
- **Equity and Privacy**: Address equity in services like grid export and ensure technical solutions protect customer privacy.
- **Practical and Equitable Solutions:** Utilize tangible examples to explain policy impacts and promote understanding of cost-reflective pricing as an option.

INDIVIDUAL

- **Impact of Tariff Changes:** Address how historical investments in technologies like photovoltaics might feel undervalued due to new tariff structures.
- **Educational Outreach:** Increase efforts to educate individuals on the challenges and opportunities within the distribution network to enhance participation.
- **Pricing Transparency:** Advocate for clearer and simpler pricing structures to facilitate easier understanding and fairer consumer engagement.

ALL

- **Understanding Trade-offs**: Emphasize the importance of educating everyone on the necessary trade-offs involved in energy strategies, using relatable messaging.
- **Clarifying Costs and Strategies:** Help the general public understand why costs might increase and how these relate to the overall strategy for network stability and efficiency.
- **Promoting Stability:** Focus on solving customer-related issues to enhance the stability and efficiency of the network as part of broader organizational strategies.

OTHER

- **Renewable Incentives and Definitions:** Push for more incentives related to renewables, like subsidizing costs associated with grid exports and battery investments, while also clarifying definitions around key terms like "equity."
- **Utilization of Resources:** Highlight the potential of using vast arid landmasses for battery production and other renewable infrastructure.
- **Outcome-Focused Engagement**: Encourage outcome-focused discussions in consultations, emphasizing the need to explore trade-offs clearly and effectively.

Advice to People's Panel for Layered Trade-Offs Information for Customers

To answer this second question, participants put forward their three best ideas for Jemena to consider in communicating the concept of trade-offs to customers.

IDEAS
• What has worked well globally? Delivery? Education? Outcomes? • Win-win and supports. • Short term / medium term / Long term.
• Look at extremes - Constraining the richest opportunist. The poorest with no financial options. • What support do they need now? • What is the good option message to provide win-win? • What is in it for me? Short term, medium term, long term?
• Consider Jemena's regulatory remit. What are Jemena's responsibilities and role versus government, communities and individuals - other DNSP / markets? • Address the problem and create solutions rather than admire the problem. • Be outcomes focused. • Accept that there is inequity in the system that might not be able to be solved today.
• Discuss and understand the values of the panel.
• Be bold and courageous with your ideas. Multiply by ten and work from there. Do not water down or dilute ideas from the outset.
• Bring your unique (and 'selfish') view so we can capture diverse perspectives. Start with your individual mindset.

This advice was shared directly at the Jemena People's Panel Day 3 on 24 February 2024 by one of the ERG members who attended for that purpose.

Outstanding Questions on Tariffs

In the pre-reading pack, detailed information was provided to participants on tariff structures such as:

- How Jemena recovers efficient costs through network tariffs.
- The network tariff setting process.
- The current status of network tariffs.
- Key challenges to setting tariff structures and levels.

Given this information as well as additional context provided by Jemena staff, any outstanding questions regarding tariff structures was recorded (**Appendix C**) and summary is provided below.

Tariff Options and Impact

- **Understanding Tariff Options:** Questions emphasize the need for clarity on available tariffs, with a desire for case studies or interactive tools to help users understand how changes in behaviour could affect their costs.
- **Impact of Tariff Changes:** Inquiries about how changes in consumer behaviour due to different tariff options could impact overall costs and energy usage.
- **Preventing Bill Shock:** Concerns about how to transition to new tariffs without causing bill shock, suggesting the need for mechanisms like transition buffers or adaptability in tariff structures.

Transparency and Simplification

- **Transparency in Tariff Costs**: Queries about the specific costs associated with implementing and administering tariffs, and how these are communicated to consumers.
- **Simplicity versus Complexity**: Discussion on the balance between simplicity for consumer understanding and the potential for more complex, nuanced pricing structures that reflect local consumption costs and conditions.
- **Clear Communication:** Interest in making tariffs transparent and understandable, especially in the context of annual reviews by consumers of their retail energy offers.

Integration and Automation

- **Automation and Energy Management:** Questions about how to provide automated solutions for energy management, such as 'set and forget' systems for household appliances and climate controls, which could be promoted by the government.

- **Alignment Between Retailers and Distributors:** Exploring how tariffs set by distributors and those offered by retailers can be better aligned to offer consistent messaging and pricing to consumers.
- **Adaptability in Tariff Structures:** Concerns about maintaining flexibility in tariffs when the regulatory or market reset periods are lengthy, questioning how adaptability can be sustained over time.

These themes illustrate a focus on enhancing consumer understanding and control over energy costs, ensuring transparency in tariff structures, and seeking better integration between automated energy management and tariff design.

THE VICTORIAN ELECTRICITY DISTRIBUTORS TARIFF STRUCTURE STATEMENT

During this fifth session, Matt Serpell also outlined for the ERG group the complexities involved in managing the broader Vic DNSP preferences. Matt explained Jemena's preferences and where customers' preferences may differ from this. As a result, Jemena sought ERG member advice on the following question:

"If faced with differing expectations, should Jemena place more or less emphasis on its own customers' expectations or Victorian DNSP's preferences?"

ERG Members were invited to take a position that best reflected their individual response to the question, *"Should Jemena diverge from the DNSP's?"* Responses to the question are reflected against the various positions of "Yes", "No" and "Maybe"

Yes	No	Maybe
0 Participants	6 Participants: If we are talking structure, there needs to be a common governance approach Consistency across Distribution Businesses Simplicity. Variation should be based on density, not another tariff with zero customers. Retailers to pick it up: more likely to make it happen.	3 Participants If Jemena does not need it in back pocket. Jemena can slice and dice. Pricing: If more options, then less you have to use them. Trigger tariff: As options? Consider from Jemena's specific perspective (especially individual). Regardless of battery penetration, tariffs: (Consequences on individuals and Jemena). Population density versus technology in homes Future focus and managing change.

ERG members were then invited to take a position that best reflected their individual response to the question, *"Should we take this discussion about Tariffs to the People's Panel?*

Yes	No	Maybe
6 Participants Divergence from the threshold: Yes. Raise it, so said it (not debate) Tariffs structure Take the conversation re future change / future conversation to the Panel. Collection of DSNP – recognise constraints of remoteness and density	3 Participants No if we are talking structure. There needs to be a common governance approach. FYI: Here is process. If question number one is NO then … so is two!	0 participants

SESSION # 5 REFLECTIONS

The session closed with an opportunity for participants to share their reflections on one thing they liked, one thing they wished for and one thing they were left wondering at the end of the session. Their responses are as follows:

One thing I like...	One thing I wished for...	One thing I am left wondering...
Good discussions Clear decisions	We had more specific questions to take to Jemena customers.	If we will utilise all the insights shared in these sessions and how to catch up missing members of ERG?
The mix and structure of the conversations and capture of diversity of views from all.	We had more time on tariffs with this particular group. Increase two people per group might lead to less monologuing, but who knows?	If more diverse voices would have given us different views.
The probing questions really brought out some interesting opinions we would not have heard in the Jemena silo.	Had more time to discuss	Why retailers have so much 'power' in the tariff process.
Size of breakout groups and the preparation documents - very simple for a complex topic.	The whole ERG panel is here to discuss so to get as much diverse views as possible.	If a complex topic like tariffs should be given more airtime?
The relatively visual approach which draws out participation.	We could continue to understand and hear about integration with people's panel and CVG.	What the people's panel and CVG say about tariffs?
The simple structure given such a complex topic. Level of discussions, debate and engagement.	"My in-depth knowledge was better. Sometimes there was more time to hear from the experts.	Really look forward to seeing this evolve.
Open discussion, everyone gets a say. Explanations are simple.	To put together advice to government to help advocate for tariff change.	What the summary from the session looks like and if it gives us the 'punch' for the panel session?
Discussion timing Use of space Pacing Briefing pack	Had more time.	How the people panel will respond to the ERG position.

One thing I like...	One thing I wished for...	One thing I am left wondering...
Being able to canvas a range of ideas, test and learn from them.	There was more discussion around storage batteries and of its impact on the priority areas identified.	If individuals with uptake of solar and batteries can have a different tariff? If we can have a different session for 21/02 or 1.30pm - 3pm (best) or maybe 2pm to 3.30pm?
Binary questions at the end of the pricing session		
I liked the discussion around trade-offs and priority areas.		

TARIFFS SURVEY RESPONSES

Jemena's pre reading pack for ERG 5 posed additional questions about Tariffs for ERG members to consider and provide their advice to Jemena. These were included in a survey and completed out of sessions. Survey responses are contained in a table at **Appendix D** for Jemena's consideration.

Energy Reference Group # 5.5

This was an additional online session for the purpose of providing feedback to Jemena on its proposed presentation to the Jemena People's Panel on 24 February 2024 (Day 3). Following the presentation by Matt Serpell, ERG members provided feedback about the presentation topics of:

- Investing in the Network
- Running the Network
- Tariff Types

All participant comments are contained in table in **Appendix E.**

ERG PERSPECTIVES ON TRADE-OFFS

Investing in the Network

Below is a synthesised summary of the comments related to investing in the network, highlighting the key themes and considerations. These points address the complexities of network investment, including managing risks, strategic timing, and effective communication to ensure that investments align with both current needs and future energy transitions.

Risk Management and Investment Scope

- **Balancing Risk:** Discussion on the balance between externally insuring and internally managing risks, with a focus on potential underinsurance in unprecedented conditions.
- **Investment Opportunities and Constraints:** Advocacy for energy efficiency and other investments not directly controlled by the network, including the need to navigate regulatory constraints and influence tariffs.

Investment Strategy and Communication

- **Clarification and Context:** Suggestion to clarify investment strategies, providing tangible examples and 'cheat sheets' that relate directly to consumer experiences, such as the analogy with cars.
- **Transparent Communication**: Emphasise the importance of presenting clear choices regarding key assets, investment scale, and the environmental impact, as well as communicating the overall value of services delivered.

Timing and Impact of Investments

- **Strategic Timing**: Exploration of the appropriate timing for investments, addressing what's too late and the potential impacts of delayed decisions.
- **Consumer and Future Focus**: Focus on the risks to consumers like stranded assets, the timing of investments, and aligning investment strategies with broader goals like net zero and enabling consumer transitions.
- **Inclusive Feedback and Strategy Definition:** Engage stakeholders in understanding the challenges and trade-offs, ensuring that investment decisions are well-informed and reflective of strategic goals such as enhancing data connectivity and managing new technologies like electric vehicles and data centres.

Running the Network

Below is a synthesised summary of the key themes associated with running the network based on the comments from the energy reference group members. These themes reflect the complexities involved in running the network, where clarity, regulatory compliance, and effective communication play crucial roles in ensuring efficient and secure network operations.

Risk Management and Regulatory Compliance

- **Clarifying Risk Metrics:** Comments suggest that risk profile graphs are not easily understood by those outside the risk management profession, indicating a need for clearer explanations or more practical examples.
- **Regulatory Considerations**: Emphasis on the importance of considering regulatory perspectives, particularly around the notions of prudence and efficiency in network operations and investments, as the regulator might modify or reject proposals if they do not meet these criteria.
- **Prudence and Efficiency:** Discussions underscore the subjectivity of "prudent" investments and operations, stressing the need for careful definition and justification of these terms in the context of regulatory reviews.

Data Security and Management

- **Importance of Data Security:** Increasing recognition of data security as a critical operational requirement, moving from a "nice to have" to a "license to operate."
- **Budgeting for Data Security:** Queries about whether data security should be classified as operational expense (opex) or capital expenditure (capex), highlighting the need for clarity in financial planning.

- **Consumer Data Rights and Transparency**: Anticipation of questions regarding data collection, management, and sharing practices, especially as consumer data rights become more prevalent, suggesting a need for transparent data policies.

Communication and Public Understanding

- **Engaging Examples**: Advocacy for the use of relatable examples, such as car maintenance or tree clearing, to help the public understand complex aspects of network management and expenditure.
- **Balancing Security and Opportunities:** Potential to discuss the benefits of greater data availability and digitization alongside security and privacy considerations, aiming to balance these aspects to enhance both grid and customer benefits.
- **Depreciation and Operational Expenditure:** Questions about the specifics of operational expenditures, such as depreciation practices, indicating a requirement for clearer communication on how operational costs are managed and their impacts on service delivery.

Tariff Types

Below is a synthesised summary of the key themes related to the topic of Tariff Types, based on the comments from the energy reference group members: These themes reflect the complexity of designing and implementing tariff structures that are fair, transparent, financially sensible, and compliant with regulatory standards while also being adaptive to market and technological changes.

Tariff Structure and Fairness

- **Equity Considerations:** There's a focus on ensuring that tariffs are fair and equitable, addressing concerns about the potential disproportionate impacts on different consumer groups.
- **Flexibility in Tariff Options:** Discussions highlight the need for tariff options that can accommodate diverse consumer needs and usage patterns, suggesting that a one-size-fits-all approach may not be adequate.

Financial Implications and Consumer Impact

- **Cost Transparency:** Emphasis on the necessity for clear communication about how tariffs are structured and what they mean financially for consumers, ensuring that consumers understand the costs associated with different tariff options.
- **Incentives for Energy Efficiency:** Consideration of how tariffs can be designed to encourage energy-saving behaviors and investments in renewable technologies, aligning financial incentives with environmental benefits.

Regulatory and Market Considerations

- **Regulatory Approval and Compliance:** Points raised about the need for tariff proposals to gain regulatory approval, with a cautious approach to ensure compliance with existing regulations and policies.
- **Market Responsiveness**: Discussion about the importance of tariffs being responsive to market changes and technological advancements, ensuring that tariff structures remain relevant and effective over time.

ERG RESPONSES TO THE PANEL QUESTIONS:

During this online session ERG Members also provided responses to the list of questions that had been generated by People's Panel participants at Day 2 of Jemena's People's Panel on Saturday 3 February 2024. The list of questions was:

- BATTERIES: How do we commercialise the uptake of batteries?
- BATTERIES: What can Jemena do in relation to providing more 'community batteries' to help them control fluctuations in supply?
- BUSINESS CUSTOMERS: Are the interests of the larger customers such as business owners equal to or less than the interests of residential customers?
- BUSINESS CUSTOMERS: What business are there that Jemena can attract to consume the excess solar energy? (To offload the burden from residential houses)
- SUSTAINABILITY: Accessibility of renewable resources across all households and small businesses - How (and by who) can this be addressed?
- SUSTAINABILITY: Are batteries in the grid and EVs a sustainable solution? (in terms of battery life span, what happens at the end of their life and lithium availability?)
- THE REMIT: As it stands what does the group see is the biggest breakdown of contributing variables that will achieve / prepare for a sustainable future of a growing grid? E.g. solar vs battery vs doubling grid infrastructure.

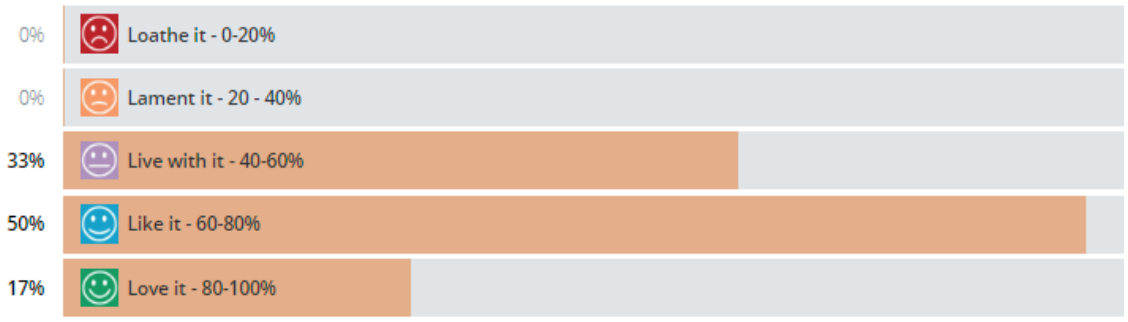
The ERG's responses are contained in a table at **Appendix F** for Jemena's records. The responses were directly shared with the People's Panel at Day 3 on 24 February 2024.

Energy Reference Group #6

ERG 6 was an in-person session facilitated by Keith Greaves from MosaicLab on 14 March 2024 attended by six panel representatives. Pre-reading materials included a detailed ERG Meeting Paper 6 covering:

1. **Future Network Strategy**
   - Background
   - Jemena's Future Energy Scenarios
   - Digital System Investments
   - Critical Themes for Digital System Investments
   - Proposed Program of Works
   - Foundational Platforms & Staged Implementation
2. **Control and Network/Customer Security**
   - Data Sharing
   - Digital System Cyber Security
3. **Setting up for success with the Price Reset**
   - Need for continued adjustment and investment.

Session activities were designed to explore ERG members' perspectives about the proposed Future Grid Strategy and Digitisation of the Network. ERG members were polled about their level of comfort with Jemena's proposed approach. The range of responses is reflected in the diagram below showing the ratings for 'How comfortable are you with Jemena's approach of managing the Future Network Strategy investment approach?'



Participants were asked to comment on what if anything would make them more comfortable with the approach and what else Jemena should be considering. These comments are contained in the table below.

Q1: Level of Comfort Rating	Q2: What, if anything, would make you more comfortable with this approach?	Q3: Based on your experience with digital systems implementation what should Jemena be considering?
Live with it - 40-60%	▪ Consider the DSO degree of orchestration that can be built into the no regrets digitisation programme for the Submission. Including proof of concept programs.	▪ A comprehensive cyber security governance framework, including cyber security SMEs being retained by Jemena. Maybe opportunities to co-operate with other Vic DNSPs on developing standard customer third party facing applications.
	▪ Ensuring that Jemena retains negotiation power and intellectual property with the vendors on any changes required going forward.	▪ Read 'They write the right stuff' FastCo (1990?) about the process NASA uses to ensure their control code is fully transparent and serviceable. Fully work through your functionality requirements down to each logical unit by analogy before you code anything. Keep that intellectual property, the data dictionaries and the ability to get anyone to do code changes for you, rather than be locked into a particular provider.
Like it - 60-80%	▪ Having a clear selection criterion for decision making. ▪ E.g. What level of - cost-reliability, ease of use, speed to market, ease of replacement / or improvement capability, and being clear about what payoffs you are willing to make.	▪ Ensuring internal SMEs and users are integral to the design and development; Speed to market is more important than gold plating it to death Realising that whatever you do will likely be redundant in the future, so the ability to replace, redesign or upgrade will be important. No need to reinvent the wheel when this is a similar challenge across many different industries and companies.

Q1: Level of Comfort Rating	Q2: What, if anything, would make you more comfortable with this approach?	Q3: Based on your experience with digital systems implementation what should Jemena be considering?
	▪ I think Jemena's approach so far is proactive, which is very commendable.	▪ Co-design using Jemena's in-house developers with external partners. To do this however, Jemena should first have their considerations or terms outlined prior to engagement with external partners. Other considerations for partnership should include speed of implementation, reliability, cost, technical/IP ownership, risks if something goes wrong or future bug fixes.
	▪ Understanding the data, cyber and cloud infrastructure foundations that must evolve alongside DERMS, ADMS and other new capabilities. Consideration for the customer's role in cyber should be included in the approach.	▪ 1. Adopt and iterative, staged approach to implementing new capabilities. 2. Do not develop software platforms in-house. Use the expertise if the market (proven vendors) or partner with vendors to develop new capabilities together and share the risk. 3. Build and enhance in-house skills to develop solutions on top of existing platforms where appropriate. 4. Consider outsourcing strategically to retain critical IP in-house e.g. where intimate knowledge of the business and the implications for technology are required. 5. Ensure adequate link / integration of customer and asset data. 6. Consider the broader business transformation and development of digital in-house skills.
Love it - 80-100%	▪ I think you have a great balance and cross section of peoples assisting with the decisions.	▪ Cost of implementation - but a product v developing your own - risk associated with both - time / speed to market …. How much time will either option take v time available - ease of use of the systems especially for people not familiar with digital - is this something that competitors in this space are facing so if so, it is worth calling

Q1: Level of Comfort Rating	Q2: What, if anything, would make you more comfortable with this approach?	Q3: Based on your experience with digital systems implementation what should Jemena be considering?
		them all together and creating a product that all users access - who can access / hold the data? You don't want a 3rd party having an error / leak and yet Jemena are facing the media on it - how robust is their system to cyber-attack if using outside firm

EXPLORING NETWORK CONTROL AND CUSTOMER SECURITY

ERG members then explored three questions related to the topics of data requests, security and operation technology expenditure. A high-level thematic synthesis of responses is provided below, with the raw data included in tables at **Appendix G.**

Question 1: What criteria should be used to determine if data requests are to be granted and who should bear the cost?

Thematic summary:

- **Nature of the Data Request**: Differentiate between public data manipulation and access to non-public data, considering the potential public good.
- **Risk of Cyber Attack**s: Evaluate the risk of cyber-attacks as a result of data sharing and the sensitivity of the data requested.
- **Cost Responsibility**: Discussion on whether costs should be borne by Jemena or the requester, with suggestions to charge for the service rather than the data itself, akin to fees for bespoke services.
- **End-Use and Resale Concerns:** Consider the intended use of the data and whether it has potential to be resold, which could influence the approval of the request.
- **Request Complexity and Value:** Assess the level of complexity and the value of the data to both the network and the requester to determine the appropriateness of granting access and setting fees.
- **Monitoring and Integrity:** Need for ongoing monitoring of the types of data requests received and maintaining the integrity and reliability of the data once accessed.

Question 2: What advice would you give to Jemena about security of the new system platforms?

Thematic summary:

- **Collaborative Security Design**: Recommendations to co-design security frameworks with other DNSPs both locally and internationally, using shared experiences to enhance security measures.
- **View Security as an Investment:** Treat cyber security efforts as ongoing investments rather than mere expenses, considering the high frequency of cyber-attacks on companies.
- **Continuous Improvement:** Encouraged continuous evolution of cyber maturity, especially with increased digitisation.
- **Role of Employees and Standards Compliance:** Stress on educating employees and customers about their role in cybersecurity and ensuring compliance with current security standards, possibly aiming to exceed them.
- **Leverage Experience:** Use existing knowledge from other DNSPs and industries to leapfrog potential security pitfalls.
- **Inhouse Expertise and Success Criteria:** Build internal expertise and define clear criteria for success in cybersecurity initiatives.

Question 3: Do you think DNSPs are spending too much (or too little) on Operation Technology security?

Thematic summary:

- **Concerns over OT placement**: Debates over whether OT should remain in a DMZ or if data sharing suggests a need for open systems, reflecting concerns about transitioning from secure, isolated networks to potentially more vulnerable configurations.
- **Importance of Compartmentalisation**: Emphasis on simplifying, hardening, and compartmentalising systems to bolster security.
- **Difficulty in Assessing Spending**: Various comments indicate a lack of data to properly assess whether current spending is adequate, highlighting the need for benchmarks and clearer risk assessments.
- **Balancing Risks and Costs**: Discussions about the balance between the costs of security measures and the potential risks or penalties associated with system failures, with a focus on mitigating high impact or probability risks within established risk frameworks.
- **Industry Standards and Comparisons:** Questions about how DNSP security spending stacks up against industry benchmarks and threat levels.

SETTING JEMENA UP FOR SUCCESSFUL DELIVERY OF THE REMIT

The final activity for ERG members in this session was to provide advice to Jemena about setting themselves up for success. This advice was themed by ERG members with clarification provided about the intent of each idea proposed. ERG member comments are contained in the table below.

Setting up for success		
Theme	**Idea title**	**Intent of the idea**
Education (A trusted source)	Be a trusted friend to me as a customer through this transition	To be trusted by customers, who will feel they have a reliable ear to listen and aid them through this energy transition.
	Education	Inform and educate the public on what options are available today and in the future on alternative energy. What Jemena are doing (so a PR exercise). Better communication leading to better outcomes.
Resilience	Grid expansion to improve network stability	Grid expansion and collaborate with other DNSP's and government to fund the network expansion
	Prepare for the apocalypse	Climate change (storms, fires, heatwaves) will bring material risk to physical assets. Minimise risk and mitigation (and loss) of exposure by prioritising high risks. Utilise best available technology and data.
	No regrets network upgrades (Capacity)	To provide scope for CER integration. While IT systems are being developed and implemented. To support expected growth in load and CER.
Energy storage	Battery investment and optimisation	Jemena should focus on codesigning or investing more in batteries to reduce load on the grid/network batteries / community batteries.
	Community battery access	Hold excess solar energy to manage off peak demand. Enable maximum value from household solar panels.
CER acceleration	Supercharge the EV revolution	Make it super easy, efficient and compelling for customers to invest in EVs.

Setting up for success		
Theme	**Idea title**	**Intent of the idea**
	Get out of the way of rooftop solar investments	Rooftop solar PV is the only renewable energy sources currently on track to meet targets. We need this to continue. Make it easier, equitable and optimised.
Customer voice	Synthesise (integrate) customer and ERG inputs with business decisions and the proposal	To use the rich customer and ERG inputs in decision making and to reflect this effectively in the proposal.
	Articulate clearly the expectation of customers to the AER	Link the clear expectation of customers (voices and peoples panel) to the services that can be delivered. Ram it home to the AER.
Digital Transformation	More investment in digital technology	Focus on co-ownership or full IP rights. Aks 'digital twin'.
Accessibility	Cost reflective pricing	What incentives are there for tenants/ landlords to take up solar energy alternatives? If I own a building, what incentives do I have to support alternative energy usages? If I rent a building what incentives are there for me to support?
	Maintain emphasis on reliability, affordability and equity	Don't' lose sight of fundamental outcomes that all consumers should be entitled to.
Renewable energy penetration	600% renewable enabler	How do we make decisions to ensure energy export future?
	Back casting from vision close to 100% renewables	Being better able to see the path from now to then by looking in reverse. Are we doing anything outside that framework? Equity, fairness, achievable, robust.

Energy Reference Group #7

ERG #7 was an online meeting on 17 April 2024 attended by all 10 panel representatives facilitated by Keith Greaves and Belinda Lowing from MosaicLab.

Pre-reading materials included the draft Jemena Electricity Network Pricing Reset Recommendations – Panel Report.

The Purpose & Objectives of this final ERG session were to:

- Consider the Jemena People's Panel draft recommendations
- Meet with panel representatives & hear about the intentions behind the recommendations
- Provide insights & considerations for Panel reps to take back to Day 5 People's Panel on 20 April 2024
- Provide perspectives to Jemena about the draft recommendations and their potential implications for Jemena's consideration

Four of the Jemena People's Panel members joined the first part of the session to share their Panel experiences. In small group discussions panel representatives shared their insights and responded to ERG members questions about the Panel process so far and the intention behind the draft People's Panel Recommendations as they stand. With those discussions in mind, ERG members then provided commentary on each of the current draft Recommendations for the Panel to consider at its Day 5 session on 20 April 2024 where Panel members would focus on finalising their People's Panel Report of Recommendations to Jemena.

A high-level synthesis of ERG commentary is provided here, with the raw data included in tables at **Appendix H.**

Draft Recommendation A: Equitable Tariff Reform

- Need to address trade-offs and potential future benefits versus immediate impacts to ensure clarity and fairness.
- Clarification required on the role and implications of mandatory export tariffs and how these fit within the broader context of equitable reform.
- Consideration of the retailer's role and better coordination among stakeholders for effective implementation.

Draft Recommendation B: Corporate Responsibility - Addressing Sustainability/Carbon Footprint

- It is suggested that sustainable technologies be integrated over time through normal asset replacement cycles.
- Acknowledgment of potential trade-offs between investment in sustainable technologies and the cost impact on customers.

Draft Recommendation C: Network Reliability and Resilience

- Explore non-augmentation solutions such as local energy systems (e.g., batteries, substation improvements) to enhance reliability and resilience.
- Necessary to evaluate the trade-offs between cost and benefits to achieve desired reliability levels.
- Consideration of solutions beyond current regulatory frameworks, like community batteries or aggregator models.

Draft Recommendation D: Digitisation and Automation to Increase Economical Reliability

- General agreement on leveraging technology and data to drive greater efficiency and asset utilisation.

Draft Recommendation E: Allow Storage by Distributors

- Suggest enabling distributors to utilise and export energy from community batteries to the network.

Draft Recommendation F: Customer Education

- Emphasises Importance of clear and succinct messaging.
- Suggestion to possibly merge this recommendation with Recommendation O for greater coherence.

Draft Recommendation G: Jemena to Maximise Green Energy

- General agreement with the direction, though there's a suggestion to assess whether this overlaps with other recommendations and if it is sufficiently distinct.

Draft Recommendation H: Collaboration to Ensure Efficiency

- Points to the need for tariff coordination across all Victorian distributors and explores whether collaboration might face challenges under regulatory scrutiny like the ACCC.

Draft Recommendation I: Equitable Tiered Tariffs

- Calls for a clear definition of different user groups to tailor equitable tariffs effectively.

- Raises questions about the concept of 'equitable' and how it should be applied across different user demographics.

Draft Recommendation J: Creation of Battery Incentives for Customers

- Potential overlaps with other recommendations related to energy storage and incentives.
- Questions about the inclusivity and accessibility of the incentives offered.

Draft Recommendation K: Long-Term Sustainable Operation of the Grid Network

- No specific comments provided.

Draft Recommendation L: Jemena Incentivises/Promotes Off-Peak EV Usage

- How could Jemena implement this and whether it should also include home infrastructure in addition to public charging stations.

Draft Recommendation M: Implement and Explain Transparent Tariff Structures

- Clarify Jemena's role, whether as a supporter or leader, and how to add value to customers understanding of tariffs.

Draft Recommendation N: Jemena advocate and plan for Solar Panels with energy storage in all Greenfield Building Developments

- Call for clarity on the objectives and outcomes expected from advocating for solar panels and batteries, and suggestions to keep technology choices flexible and agnostic.

Draft Recommendation O: Efficient and Accessible Communication from Jemena to Customers

- Emphasise the need for proactive and varied types of customer engagement and the measures of successful communication strategies.

Draft Recommendation P: Ongoing Service Excellence to Jemena Customers

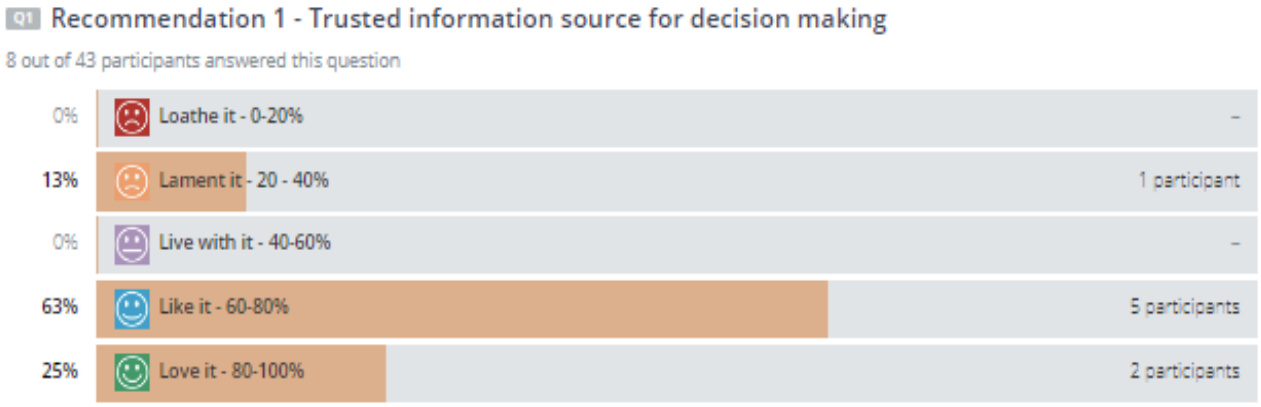
- Request clarity on who Jemena's primary customers are, the definition of service success, and considerations for future services and technology integration.

ERG'S BEST ADVICE TO JEMENA

The purpose of this final activity was to build on the 'Setting up for success' activity in ERG #6. ERG members worked in small groups to extend the initial suggestions into specific recommendations for Jemena to consider on behalf of ERG. ERG members then individually rated their level of comfort with each recommendation and added relevant commentary. Below are the rating outcomes and related tables of commentary for each ERG Recommendation.

ERG Recommendation 1: Trusted information source for decision-making

Heading:	Trusted information source for decision making
Description:	Clearly set out options available to customers in choosing tariffs, and in selecting electrical equipment to minimise operating costs and reduce overall carbon footprint. Consider providing simple economic returns guidance. Seek similar status to CHOICE magazine or similar style of information - provide information across a range of criteria (e.g., cost, demand responsiveness, other criteria) Perhaps collaborate with CHOICE? Kate addition: comms piece
Rationale:	In the face of an internet snowstorm of contradictory advice, need a calm informed voice to guide decisions at those very rare times that people are open to electrical equipment change.

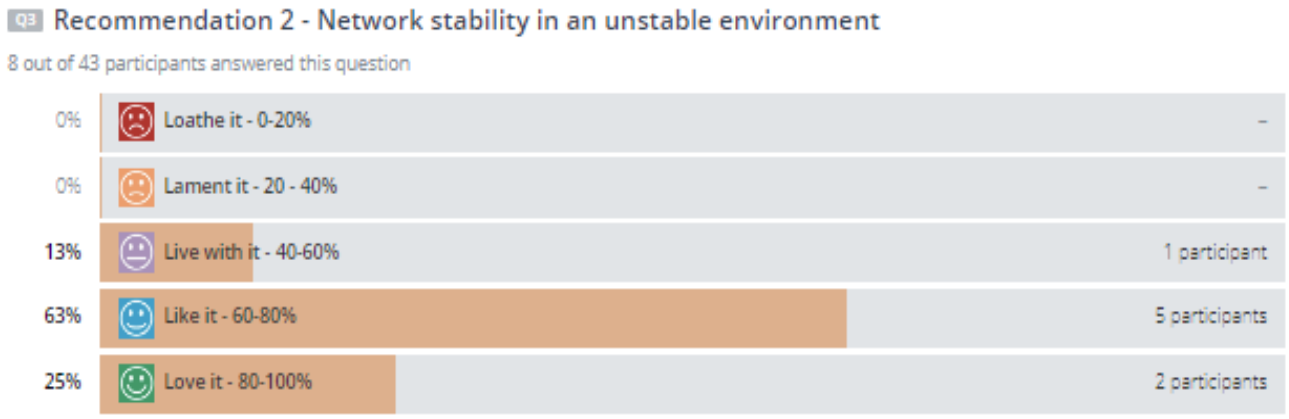


Rating	What would make you more comfortable?
Lament it (20 - 40%)	Not sure a DB can do this - agree with the trusted source of information but there is a 'How to do it and where and when to do it' that needs more work given the structure of the energy market - and of course this will change over time so need a temporal lens.

Rating	What would make you more comfortable?
Like it (60-80%)	Like the idea around CHOICE
	Provide reaccommodated sources of information and education like a standard
	The tariff options available is difficult as it depends on what the retailer chooses to pass on > but as a concept, it works.
Love it (80-100%)	Expansion on channels to educate and inform the customer - understanding of effectiveness of existing channels. Increased brand awareness is also required to support education and customer awareness.
	I like it, can't have enough comms.

ERG Recommendation 2: Network Stability in an unstable environment

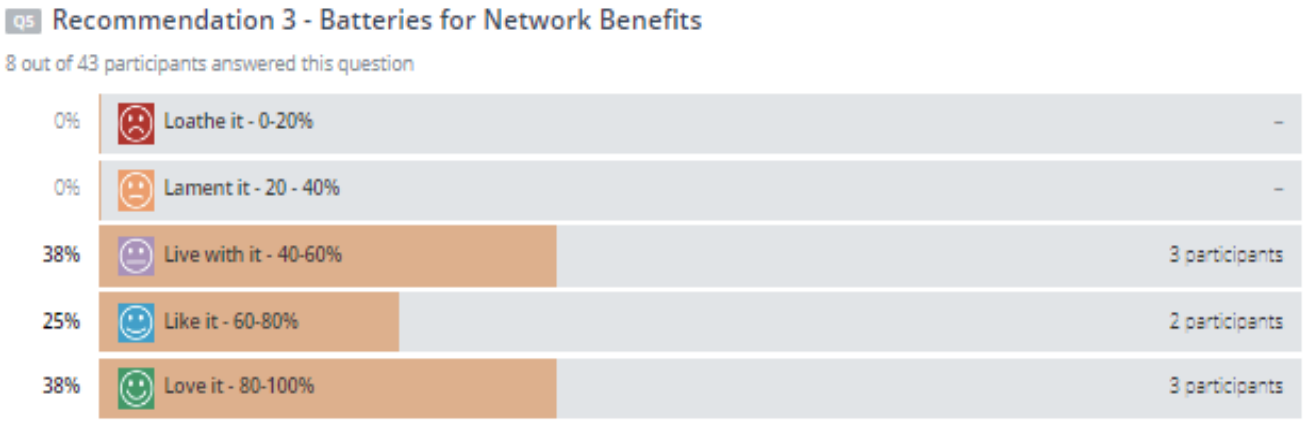
Heading:	Network stability in an unstable environment
Description:	Triage high risk points. Adopt best available technology for instantly/rapidly absorbing and responding to shocks and coordinating recovery. Look at integrating responsive storage and load control in the best locations for SCADA control and FCAS response to shocks, and demand response. Retain optionality for future emerging technology solutions (i.e. don't over invest in one big cumbersome solution) Continue to look forward, plan for ongoing technology changes. Continue to consider and explore non-network augmentation solutions to bolster network capacity and manage investment levels. Look to localised solutions e.g. placement of community battery relative to transformer, to improve resilience at a relatively lower cost. Requires deployment control to manage black swan events. Elicit consumer / community views so that they shown to be heard and understood, and demonstrate action is being taken to develop (co-design) appropriate solutions (e.g. natural disaster mitigation and response etc)
Rationale:	Prepare for black swan events. Extreme heat and wind disproportionately impact asset longevity. Minimise risk and mitigate exposure. Technology will continue to evolve during this time period; large investments in single solutions are at high risk of redundancy in the short term.



Rating	What would make you more comfortable
Live with it (40-60%)	Think is falling short as it not optimising third parties other resources such as behind meter community etc the sum of all the parts are greater than the individual bits
Like it (60-80%)	Investment is definitely needed - however non-network augmentation options should continue to be considered (this is mentioned in localised solutions); but just emphasising!
	Maybe me, but I would just 'dumb down' the language slightly if using for external purposes so that the 'punter' understands
	Need to be careful how we describe the use of community batteries, i.e. in a blackout they can't provide back-up power unless they have very specialised and expensive inverters fitted (not used today).
Love it (80-100%)	Ensure that evidence of a consumer / community-centric view is incorporated into solutions for resilience - so the discussion is not purely technical. The rationale and the benefits must be articulated in a non-technical way.
	Sufficient focus on non-network solutions is required to provide lower cost options.

ERG Recommendation 3 – Batteries for Network Benefits

Heading:	Batteries for Network Benefits
Description:	Install network side batteries to relieve network constraints, either demand or PV export constraints. Where the battery is the most economical option (e.g. targeted approach - specific constrained areas - substation level).
Rationale:	Provide network solutions that are lowest cost to customers and can also provide other benefits accessible by market participants, i.e. system services. These other beneficiaries can then share costs to the benefits of Jemena customers.

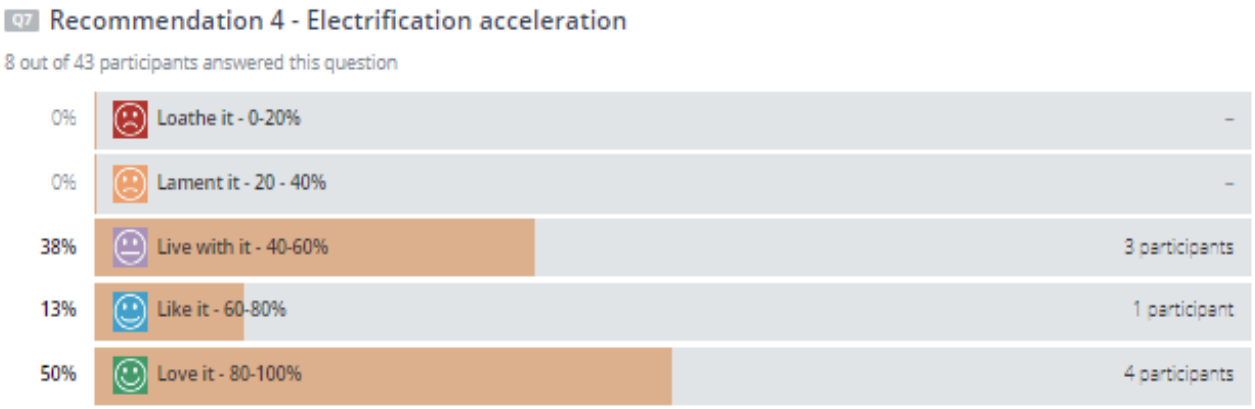


Rating	What would make you more comfortable
Live with it (40-60%)	Clarify desire for network supporting batteries to be for the wholesale market trading reward of an investor (council / local residents / PPA / etc), and that Jemena would just be getting the benefit of asset protection by (intermittently?) controlling the storage charging / discharging.
	Need more work in what context and for what purpose batteries can be a bit of the new bight shinny thing we all need horses for courses
	Seems reasonable
Like it (60-80%)	Does this require a change in energy regulation?

Love it (80-100%)	Clarity on how stored energy is dispersed, who benefits, and how.
	Definitely a way to assist with constraints
	Highlight that other market participants can contribute upfront to the network battery costs, if they will be using it for their benefits.

ERG Recommendation 4 – Electrification Acceleration

Heading:	Electrification acceleration
Description:	Facilitate EV uptake, gas to electric substitution and rooftop PV. Some augmentation complemented by increased technology to allow smarter use of the network capacity, greater use of dynamic operating envelopes and tariffs for both demand and export. Complementary with network tariffs, and tools to aid customer agency to manage their usage and flex usage timing.
Rationale:	Facilitate greater sharing of the network capacity (load and PV export) to make it easy for customers to choose and manage their electrification options. Gas to electric appliances are less an option in the future, with the gas policy it will become non-discretionary.



Rating	What would make you more comfortable
Live with it (40-60%)	Accelerate electrification. Encourage and inform uptake.
	Can see this one a bit better just need some more narrative around it so I'm sure that it like is that's why I'm at live with it
	Seems reasonable
Like it (60-80%)	I like that it encompasses all electrification - would be better if highlighted both behind the meter supply AND demand. Like that it talks to the gas substitution element - it would be beneficial to be clearer about what role Jemena would play here.
Love it (80-100%)	Consumers can assist in paying for the transition (by investing themselves). Need to encourage & support this behaviour wherever possible
	Discussion on the forecast network constraints arising from accelerated PV adoption, and how the potential cost implications of this (e.g. battery or augmentation investment).
	If customers are provided with tools or services that make it simple for them and doesn't disrupt their lifestyle.

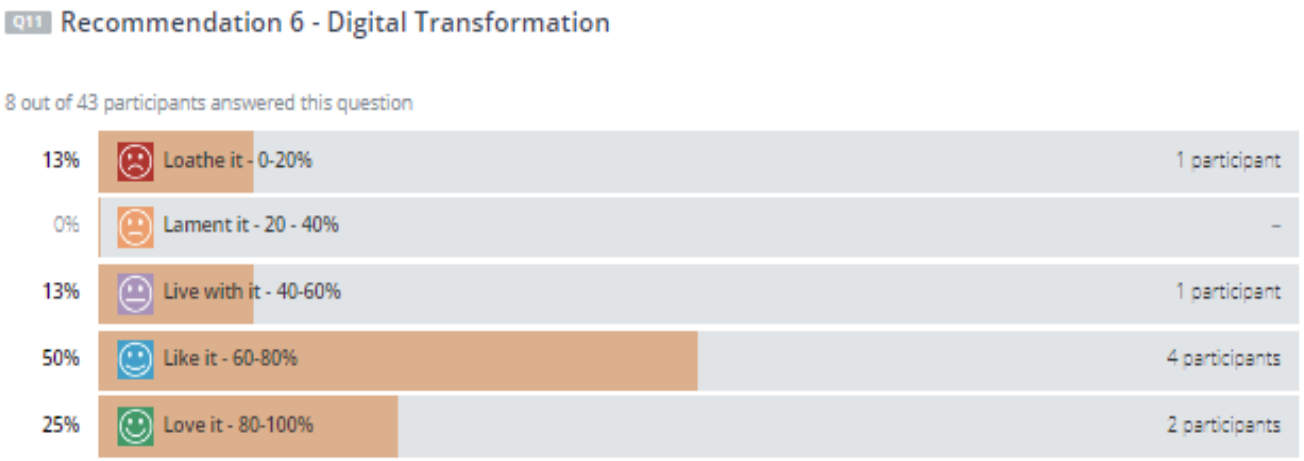
ERG Recommendation 5 – Temporal accountability: openness and transparency

Heading:	Temporal accountability - openness and transparency
Description:	how is this connection to consumer value and expectations continuously recrafted and revisited through the reg period so meets the needs of future Jemena customer and community where values and preferences cannot be delivered or met a clear and honest and explanation is provided shares these values and expectations with decision makers regulators, policy makers etc
Rationale:	builds trust and lays the foundations to the new energy future it also mitigates risk and supports informed decision making provides greater understanding of consumer preferences and therefor they can be better met

Rating	What would make you more comfortable
Lament it (20 - 40%)	Temporal is not a good word for this. Heading is not a good summary. It would be better if the focus was about it being a continuous, ongoing customer engagement - so it's not "one and done" every 5 years. Pace of change is going to accelerate, so checking in that infrequently is not sufficient.
	This needs more work.
Live with it (40-60%)	Advocacy for consumers in discussions with regulators (e.g. if "x" rule change could happen, we would be able to do "y" which is what our customers want); but also advocacy for consumers in other spaces - e.g. energy efficiency (if we all had more energy efficient homes, less augmentation would need to occur as load may decrease)
	Seems reasonable
Like it (60-80%)	Ensure Regulators buy into this.
	Seems clear
Love it (80-100%)	Provide more insight on shared value

ERG Recommendation 6 – Digital Transformation

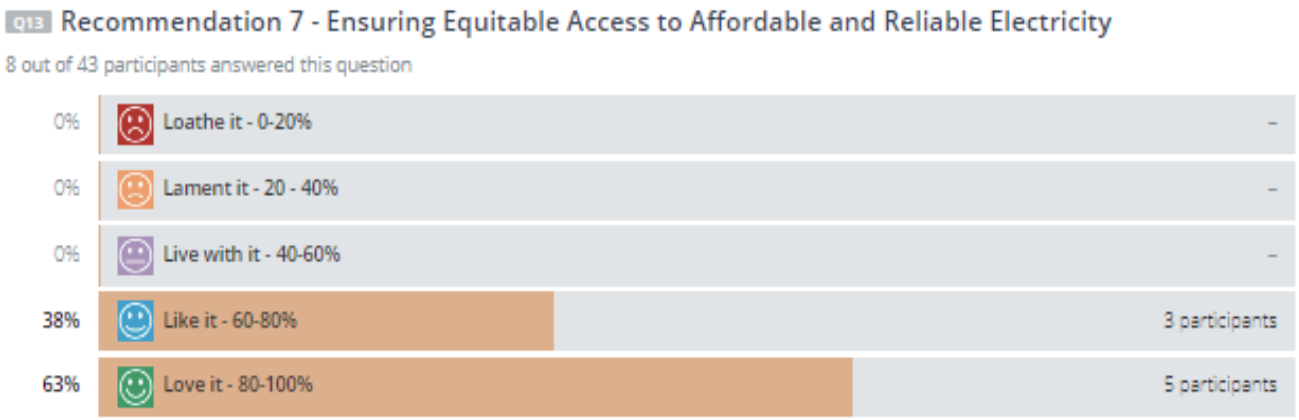
Heading:	Digital Transformation
Description:	Network can be an active participant e.g. DoE Network can also support other parties e.g. consumers, agents, to develop their own solutions This is not about centralised control, proprietary technology. It's about openness and operating in an ecosystem. The focus must be on consumer benefits, and agency for consumers and community - not evolving into a BigTech role. Stewardship role for the technological transformation of the energy network - lend expertise re integration, orchestration, data management, AI Make sure that all have opportunity in this future Focus on outcomes for consumers
Rationale:	laying the foundation for a distributed energy future which put consumers at the centre of energy transition



Rating	What would make you more comfortable
Loathe it (0-20%)	Very motherhood-y. Not clear what this is recommending. Very ambiguous.
Like it (60-80%)	Perhaps discuss impact on customer data security and privacy
	Reads well
	Using the data we have available to provide actionable opportunities for consumers (ideally almost individually depending on load pattern)
Love it - 80-100%	Again, it must be very easy for customers to participate, do they need upgrading of technology in their homes?

ERG Recommendation 7 – Ensuring Equitable Access to Affordable and Reliable Electricity

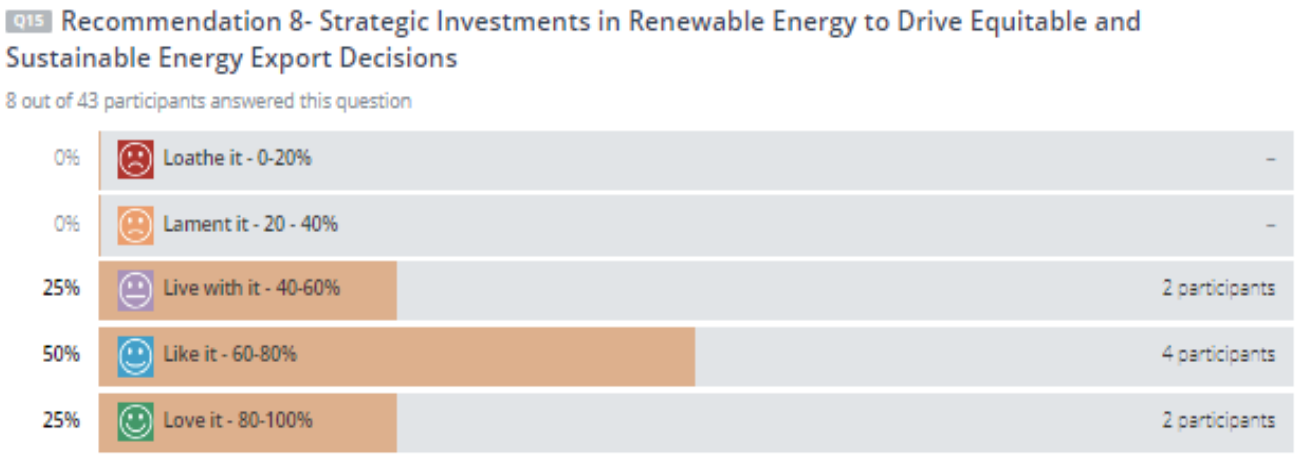
Heading:	Ensuring Equitable Access to Affordable and Reliable Electricity
Description:	1. Ensure all consumers are able to access the benefits and incentives offered for solar /new energy resources 2. Make available incentives to all users to eliminate inequities (such as landlords and tenants) 3. By ensuring equitable access, we strive to bridge socio-economic disparities between different customer groups. 4. cost reflective signals for efficient and optimal investments 5. this need to be temporal and adaptable over time 6. focus on improving optimising network utilisation to lower overall unit costs
Rationale:	1. To promote equity and fairness for all users 2. Assist all consumers to access energy when they need it (overrides outages)



Rating	What would make you more comfortable
Like it (60-80%)	Seems reasonable
Love it (80-100%)	Nothing to add
	Outlining specific benefits to particular customer groups
	What is missing - "how" to do this. As a high-level principle, this is good.

ERG Recommnedation 8 – Strategic Investment in Renewable Energy to Drive Equitable and Sustainable Energy Export Decisions

Heading:	**Strategic Investments in Renewable Energy to Drive Equitable and Sustainable Energy Export Decisions**
Description:	1. Examine emerging technologies that are sustainable 2. Prioritise investments in renewable energy infrastructure to ensure long-term sustainability 3. Foster collaboration between stakeholders to develop equitable frameworks for making energy export decisions, considering social, economic, and environmental impacts 4. create frameworks and structures that find users for this energy 5. focus on orderly and efficient integration and optimisation
Rationale:	1. To enable a reliable and safe energy source, mitigating climate change in the process. 2. Economic Opportunity: Renewable energy investments create jobs, stimulate economic growth, and enhance energy security, providing long-term benefits for communities and industries. 3. Prioritising renewable energy promotes equitable access to clean and affordable energy, addressing energy poverty and promoting social justice.



Rating	What would make you more comfortable
Live with it (40-60%)	Again, like these are high level principles. Not clear however - is this the role of Jemena to invest?
	Wasn't clear whether this is seeking Jemena to invest in renewable energy generation or invest in the network infrastructure to support the renewable generation.
Like it (60-80%)	Ensuring VRE penetration isn't stopped through other means (e.g. export tariffs) - links back into Recommendation 4
	Shorten the heading. Strategically invest in zero carbon energy. Focus on system wide carbon reduction (rather than peaking generators filling the holes created by stoichiometric renewables)
	Seems reasonable
Love it - 80-100%	Identify specific renewable energy technologies to invest in

Appendix A:

ERG comments so far

Process

In summary it is a good process, people are well engaged and would like more time to deep dive into the detail of topics with support from Jemena. There is deep curiosity about how ERG inputs will intersect with other engagement activities, and how they'll influence Jemena's proposal.

Like:

- Depth & focus of conversation vs pushing quickly through multiple detailed topics (ERG #3 LLW)
- More customer centred / market outcome focused questions (ERG #3 LWW)
- The challenging content and the diversity of views and voices within the group (ERG #2 LWW)
- The level of conversation around the environment, the structure of the dialogue, and the people (ERG #2 LWW)

Wish:

- That we had more time to debate some of the comments (ERG #3 LWW)
- Maybe some specific time with some JEN 'techsperts' to discuss and collaborate on a key issue (ERG #3 LWW)
- Spend a bit more time with the JEN people to understand their perspectives (ERG #2 LWW)
- We had more time to dig into these very meaty topics (ERG #2 LWW)
- We had more time to discuss in the small work groups and we had access to quantitative, comparisons of these investment business cases (ERG #2 LWW)

Wonder:

- What other inputs will come from the Peoples' Panel and Customer Voice Groups, and how we integrate these into our discussions (ERG #3 LWW)
- How all the various streams of feedback and information will be blended (ERG #2 LWW)
- How our inputs will dovetail with People Panel inputs (and vice versa). (ERG #2 LWW)

Outcomes for customers

In summary there is a strong ERG focus on the links between communication, information, service delivery and trust for Jemena to be able to provide good outcomes for customers; particularly the more vulnerable.

- I wonder if the questions could be more customer centred (or market, outcome focused), or that there are more customer centred questions - in our breakouts I find we tend to have quite technical discussions at times. (ERG #3 LWW)
- Recognition that there is increasing consumer interest in energy costs / energy transition (ERG #3 Plenary)
- Real time pricing:
- There is trust for distribution networks and knowledge is increasing with customers. What are the opportunities for real time pricing? (ERG #3 Plenary)
- Understanding the electricity market and the cost is important - there is a demand for information and to make it accessible. (ERG #3 Plenary)
- How can Jemena forward plan, particularly communication is key and they need to be on the front foot. Critical for Jemena's brand. (ERG #3 ESS grp)
- I wish we could look at a variety of proposed billing models to address niche needs especially the vulnerable. (ERG #2 LWW)
- Social need to convey a warning to discretionary customers before cutting their load off supply. Less impact if cutting generation off export, but a warning would be appreciated. In house signal at the socket? (ERG# 3
- Grid stability & flexibility grp)

Customer – communication / engagement & education

In summary ERG sees effective customer communication and engagement as critical to a successful energy transition.

- Effective communication with customers (ERG #2 – Network Perf grp)
- Communication is key to be a trusted voice to consumers to explain how they can benefit through this under Jemena (ERG #3 ESS grp)
- Good role for Jemena to get on the front foot - communicate it out to business and customers. Raise up the trusted voice piece. (ERG# 3 Export / demand grp)
- Communication with customer re flexible exports / import and DPV backstop will be critical. Increasing use of these services will need good communication to customers (ERG # 3 grid stability & flexibility grp)
- JEN can be a trusted voice providing information, data and clarification to consumers and business to aid their energy choices (ERG #1)

Where to act (Jemena's role)

In summary Jemena has to determine its role in the supply chain, where it has control and where it can influence; and its focus should be on service design and delivery.

- What is Jemena's role in supply chain?
- Is it Jemena job to disrupt? or is it the Local Gov of Energy (Essential Service Provider) (ERG # 3 Plenary)
- Jemena has a role in non-mandatory ESS (such as providing services) to ensure energy is provided in an efficient way to customers as we transition (ERG 3 ESS group)
- Role in designing services Service Design?
- Relationship and the ability to enhance this with the customer. Unique place in the system chain. There is a role in designing more services for customers. This is important around data. Insights from smart meters - high potential and opportunity to help shape the market and deliver better services. (ERG # 3 Plenary)
- Service is not regulated and it might be a market to step into. Jemena could walk straight into this space. i.e. dynamic connection. (ERG #3 Plenary)
- Likely will need a range of offers to meet the different customer segmentations - there's a good ARENA report on customer segmentation that talked to this. There are probably others who are largely disengaged / low understanding. https://arena.gov.au/knowledge-bank/customer-segmentation-research-and-design-for-orchestration-programs/ (ERG #3 Export / demand grp)

Where to influence (Jemena's advocacy)

In summary Jemena has opportunities to influence customer behaviour, and how retailers engage with those same customers. Jemena also has a key advocacy role on behalf of customers in its interaction with the government and other market players.

- Retailers – opportunities for more direct relationships with customers – q is around how to effectively communicate
- Good idea for Jemena to consider retailer options. Jemena has a high industrial customer base and the cost of running a business is keeping business owners up at night. Be good to look at supporting them from a retail perspective. (ERG # 3 Plenary)
- Opportunity to bundle and work with more dynamic retailers or is there anything stopping Jemena to become a retailer as well? It would allow you to play around and create options that help go to the problems. Opportunity to influence batteries. (ERG # 3 Plenary)

- Advocacy with Gov – Qu: Could government come into support the development of the market and reinvesting in the market - this could be a recommendation. (ERG #3 Group prep)
- Market – Qu: Service classification - we identify the services that are under mandate. Emerging markets have a number of parties coming in, they are non-mandated, but emerging and it is managing the changing market. (ERG#3 Group prep)
- Consumer behaviour - need to really lean into the behaviour change and understanding of what the different elements mean i.e. off peak (ERG #3 group export /demand)

Distributor challenges

In summary Jemena may need to consider expanding its regulated role to provide good customer outcomes in a volatile market where consumer behaviour change is needed

- Volatility of wholesale market
- Jemena may need to step in to provide services that are not mandated or regulated and Government needs to support this. (ERG #3 ESS Group prep)
- We (Jemena) don't think about networks as service providers, we are asset managers (Matt S). It will need to look at a change in service and for this to be backed up by policy.
- I wonder how easily it will be to educate consumers around what we spoke on today (ERG #3 LWW)
- How do we ensure that we provide ESS efficiently and at low cost through industry incumbents, while balancing the need to develop competitive markets for new, innovative technologies to contribute to these services. Can the government step in to facilitating market development more/help ensure a smooth transition that is inclusive of regulated and non-regulated entities. (ERG #3 EES grp)
- Timeline tight initially - need to get the LV level DERMS equipment installed on all LV feeders by 1Jul 24 to support the mandated DPV timeline. (ERG #3 grid flex grp)
- Compliance of solar inverters (currently 80% not compliant) ERG #3 ESS grp
- Suggestions were around balancing cost available, costing cost of investment of storage and strategies to balance potential overload. (ERG #3 export / demand grp)

Topic specific advice

Learning from others

In summary, continue benchmarking what others have done; learning from what worked well and what hasn't worked so well. It would be valuable to understand what systems and tariffs have worked in other locations already (e.g. SA, California) and what hasn't worked. What can be imported into the Vic market? (ERG #3 export / demand)

Network Performance & Reliability

In summary, in addition to risk mitigation, investment prioritisation to be based on reliability trends, awareness of impacts and consultation with affected customers.

- Consider priorisation of investment in areas with poor supply reliability based on historic trends, and on the highest impact per capita.
- Increased mitigation strategies, flexible resourcing, critical spares, operational plans etc.
- Jemena should inform customers of the impact of Jemena's investment in network reliability and emissions mitigation so they are aware of the cost implications and be part of the decision-making process of the price reset.
- JEN can look at mitigating some of the worst served customers as a matter of being a good corporate citizen, even if AER does not allow funding.
- Re HILP (high impact / low probability) events, it's appropriate to look widely at. (ERG #2 Speed dialogue)
- Providing dynamic or more granular tariffs that allow DER sources / customers to be able to make export / stop / import decisions (either dynamically or "set and forget" under a control system) would allow consumers the option to address their own import/exports. (ERG 3 Demand/ export group)
- Need to have flexible load and flexible generation that can be responsive. (ERG 3 grid flex grp)
- (ERG #2 Speed dialogue)

Environmental factors

In summary promote sustainability using commercially viable products

- Consider thinking of SF6 as equivalent to PFAS replacement - be on the front foot and create market demand for alternative product supply in Australia.
- Learn from overseas alternatives, and legislative changes
- Plan over next 5 years to implement commercially viable products as they become available. (ERG #2 Speed dialogue)

Cyber security & data access

In summary, allocate budget to improve cyber-security and consider how to balance customer needs for access to information within a well-coordinated and flexible risk management framework.

- Clear budgeting for Cyber security in terms of assets and also for customer systems IT infrastructure
- Risks and threats, and ways to manage them, are changing continuously.
- How is Jemena performing with regards to Cybersecurity relative to other DNSPs in Australia? Where is Jemena performing on the cyber maturity scale and where does it make the most impact to invest to improve?
- Need a focus on how cyber security is managed with new parties emerging in the energy transition. JEN needs to be agile and very sensitive to new investment needs
- How do we create clarity and transparency in the industry wide risk frameworks needed to balance cyber security and data access? There are numerous parties involved in developing the specific risks and measurements from federal and state to community level stakeholders. This needs to be coordinated and clearly communicated.
- Understanding where the highest risks vs reward for cybersecurity risks to inform the strategy and investment required.
- Use the data from the smart meters and previous events that have affected network security and reliability to project and forecast future trends, positioning Jemena to implement proper Cyber security measures in place to tackle potential threats and risks to Jemena's network stability.
- Customer discretion to respond to signals (with rewards) rather than central control - minimize information kept centrally. (ERG #2 Speed dialogue)

Bushfire risk & mitigation (incl. insurance)

In summary bushfire recovery costs should be spread equitably and the focus should be more on mitigating the risks of electricity infrastructure as ignition sources through affordable, and where possible shared cost solutions; recognising this will occur in the context of competing priorities at a local government level to balance bushfire protection and increased canopy cover

- Comment - equity in terms of spreading the cost of bushfire prevention to all customers. If there is a bushfire, there is an economy wide impact, this flows through to all, particularly in insurance premiums. By investing to reduce the probability, has broader community benefits beyond the immediate customers impacted.

- Community Value Stacking. Value stacking with others - community / councils etc.
- Consideration for an affordable solution to reducing the risk of electricity assets commencing bushfires.
- Council to add money to pay for ABC (HV & LV).
- Councils want more canopy cover.
- Excellent use of learnings from other Victorian DNSPs - what could be learned from other states?
- JEN should continue their current strategies with incremental expenditure replacing assets when required in HBRA (Hazardous Bushfire Risk Areas) areas with bushfire hardened' assets, i.e. concrete poles in lieu of wood poles. Increased use of REFCL's can be justified.
- Maybe some assistance (financial or informative) for landowners around tree plantation or strategies to mitigate risk.
- Risk of paying twice - what actually reduces the insurance overheads?
- Suggest Jemena should mirror data of other DNSP's prone to dealing with bushfires and understand the cost of recovery. Then utilise the information to determine the cost to Jemena to mitigate the risk of bushfire. But generally, we see Jemena investing more in the mitigation part as opposed to recovery.
- T2 User pay system. (ERG 2 Speed dialogue)

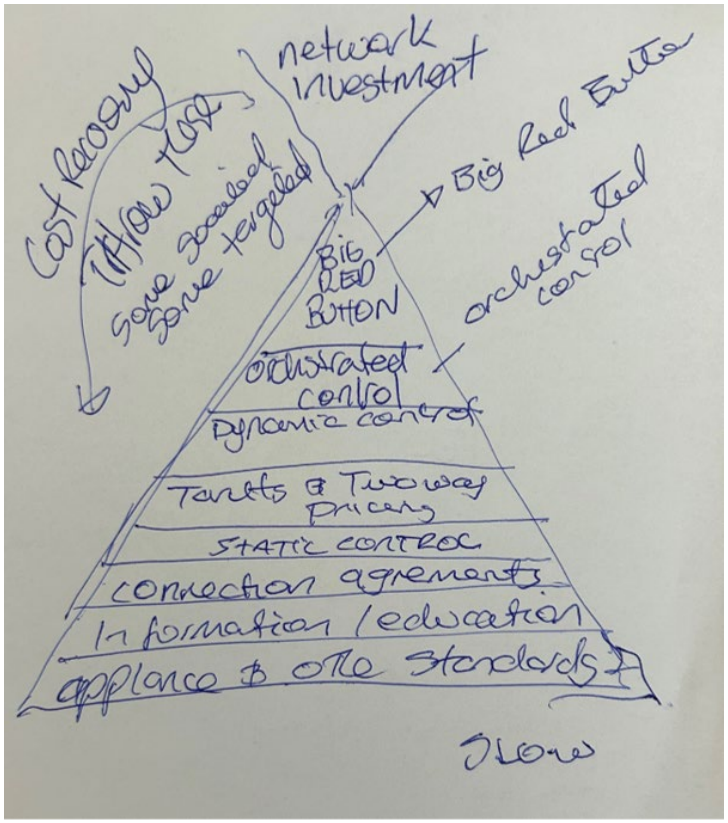
Grid Stability

In summary, at a network level, consider learning from and working with other DNSPs and EV suppliers.

Also consider the benefits of customer level solutions to grid stability through battery storage technology and time of day use.

- Resolve Grid issues at customer level through technology, building kits on the transmission system to enable stability through battery technology.
- What can Jemena learn from South Australian DNSP to address this issue?
- Battery Options. What role could Jemena play in community batteries investments to soak rooftop solar? Have the neighbourhood communities with high levels of rooftop solar been identified as best locations for community batteries? How could Jemena leverage the community battery investments program offered by ARENA?
- Consider working with EV charging network suppliers like Evie Networks, Ampol, Chargefox etc? Potential to work with.
- Customers playing a role in using the load at a particular time of day.
- Encourage Jemena to look into Load Shedding.

- Important that all DNSP's are seen to be collaborating on efficient measures to meet AEMO system obligations.
- Jemena should invest in battery technology.
- Movement of controlled load where possible (e.g. hot water, pool pumps).
- (ERG #2 Speed dialogue)
- Issue of storage - it is going to keep increasing as an issue and to get worse. Investing in storage is an investment, not a loss. (ERG #1) group export/demand)
- Investment now in 'no regrets' investments. (ERG #1)
- Suggestions were around balancing cost available, costing cost of investment of storage and strategies to balance potential overload. (ERG 3 Demand/ export group)
- LV level control required to fine tune any load shedding proportional to AEMO request. (ERG #3 grid stability & flexibility grp)



Prioritising Risk Mitigation

In summary, address risks wholistically and proportionally, with consideration of unique customer goals; focusing on improving social licence through an opportunity and value adding lens rather than a risk lens.

Acknowledge the tension of balancing ideal (moral) outcome vs operational risk management, especially in relation environmental risks.

- Customer ambitions - what are their goals regarding energy usage & this will shape infrastructure spend & priorities.
- Key priorities: how to prioritise? Different customer & stakeholder risks - not just corporate e.g. large customers / vulnerable customers - factor in and overlay with corporate risks.
- Relationship between the risks - address across the board so, one is not amplified over another.
- Shareholder risk - eco /social /safety perspectives - values
- Vulnerable cohorts with unique risks - link to how customers use the network (cater for different uses & this relates to how they use the network - e.g. Metro Tunnel - use now & future

- You can't implement everything!!! (How prioritise when not $ for everything) It is not an innovative industry in general!
- Focus on GHG - what will be the cost to Jemena - either now or later investment has to happen at some point (and no set budget in place).
- Focus on SF6 - need to put in context relative to footprint (rest of footprint for JEN) - GHG & Ozone protocols - phase out proactively vs reactively - balance tension of ideal (moral) vs operational?
- Reframing the question - look at "Opportunity' vs risk language as DMSPs will manage risk:) What is the opportunity that can be achieved? May give more social licence more quickly - i.e. value that mitigates risk (Opposite to risk :) (ERG #2 Risk Mitigation discussion)

Market trends

In summary, market trends can influence decisions; how can the market be influenced to support: emission reductions, low voltage distribution, orchestration and battery storage?

- How do we create a system that enables emissions reductions and what is Jemena's role here?
- Jemena should be a technology agnostic enabler of consumer and technology choices.
- The system is moving towards LV distribution and away from HV therefore DNSP flexibility and orchestration to enable system stability, reliability and security of supply.
- Increased CER/ P V etc but limited orchestration.
- How to get many rooftops to operate as a coordinated single resource?
- How can orchestration benefit vulnerable cohorts or those who can't participate?
- How can orchestration enable better demand management to avoid / manage demand peaks (e.g. EV / EV charging)
- How can the market support / enable better use of batteries to manage demand and move effectively distribute energy?
- Commercial and industrial (C&I) customers have different ability to be flexible with demand - need to time shift orchestration & demand input. DNSPs can enable through data metering etc to understand demand and potential for flexibility. Will also maximise / optimise utilisation of the network.
- Use of appropriate technology for rooftop solar to maximise/maintain system strength / stability e.g. grid farming as opposed to grid following investors
- How much more demand will there be with gas substitution? How can orchestration assist? (ERG #1)

- Energy transition - Rooftop solar PV is the ONLY element of renewable investments that is on track to achieve targets needed for the energy transition - constraining or stopping PV exports is wasteful and will slow investments in rooftop solar. It is the last resort. (ERG #3 GroupMap 1)
- Short term vs long term
- Long-term strategies include standards around inverters etc, education about grid stability generation and distribution, static controls, new tariffs that allow investments and extract value, dynamic controls, and orchestrated controls around supply change. Short-term strategies will be built around emergency features.
- Long term outlook for more rooftop solar PV - so need to work with it, rather than use the blunt instrument of STOPPING the export (ERG #3 group export/demand)
- Role: Perhaps provide aggressive transparency on the ring-fencing waiver for discretionary ESS, publicise data on how much your ESS has been needed versus how the capacity of emerging competitors on the market is growing, perhaps with a predeclared threshold of handover to the free market (ERG #3 Plenary)

Forecasting

In summary, forecasting requires consideration of well-informed assumptions about consumer behaviour and adoption of new technology in an ever-shifting policy context.

- Step change is never quick enough however understand that a lot of strategic planning needs to be in place for that to happen.
- Future forecasting:
- 1 uptake of retail consumption of renewables – solar
- increase in battery installations. (However cost will be a factor to be considered by customers)
- 3.customers will like to see return on investment for solar
- customer behaviour is changing how do you keep innovating
- 5.more opportunity for sharing energy technologically and community
- Network Op
- Forecasting maximum demand - key assumptions - AEMO has very broad key assumptions and what's the relevance to Jemena?
- Flexible Demand - Convenience vs Incentive for customers to modify behaviour (level of flexibility assumed is variable unknown?)
- Rate of adoption of electric vehicles (EVs) could be different to what is assumed - business convenience
- Adoption of CER assumptions - impacted by incentives faced by landlords versus tenants to adopt

- Government support for increasing adoption of CE R (and energy efficiency investment) by business and consumers - will it continue?
- Energy of heritage buildings assumed compromised by planning rules
- Consumers may cause backlash against AEMO backstop measure to stop household solar PV
- Assumptions around orchestration of customers CER by third parties is yet to be proven, versus convenience for each customer (ERG #1)

Potentially Outstanding Questions

In summary, there is much for Jemena to consider:

Role related questions

- How we can delineate between Jemena's operational responsibility and the broader regulatory and policy opportunities for impact. (ERG #2)

Investment and funding related questions

- Can we have ERG members more detail re scale of "investment" - $ (LWW ERG #3)
- What is the competitive advantage of Jemena moving to SF6 alternatives and how can you take advantage of this (how can Jemena use this change to promote your ESG position and maybe customers might understand a slight cost increase. (ERG #2)
- How is the strategy funded and who pays? Funding will shape potential solutions. (ERG #3 GroupMap 1)
- Government and Stakeholder related questions
- How can government and industry support the market scale required to make the shift towards alternatives? ERG 2

Network Operation & Performance related questions

- Can we look at applying SAIDI, SAIFI, CAIDI at more localised levels to understand these metrics for consumers. (ERG #2)
- (Split benefits) Up and down supply chain - difficult concepts - what would this look like? (ERG #3 Plenary) and who will lead it?
- Jemena q - electricity is an essential service and there is an expectation that it will go on. Does flexible imports support this? Customers need to have a personal decision on this and they are in control. (ERG #3 Grid stability & flexibility grp)
- With the Volt Var control Roadmap, will there still be a good degree of load sensitivity to voltage changes in the future with new appliance technologies? i.e. is it worth the investment? (ERG #3 grid stability & flexibility grp)

Risk management related questions

- Can we use moving to the SF6 equivalent as a test case for the new NEO rule change? (ERG #2)
- Could increasing demand for SF6 alternatives bring down in Australian DNSPs bring down the cost of these alternatives in the longer term, as supply increases? (ERG #2)
- If we could have clearer insight into the overarching corporate risk register / matrix as to where these risks currently lay - vs where stakeholders risks lay.
- Incentives & tariffs related questions
- What will opt in programs look like, and how will tariffs play a role in incentivising / signalling to customers? (ERG #3 grid stability & flexibility grp)

Equity & fairness related questions

- Will the backstop measures be equitable and fair? (ERG #3 grid flex grp)
- Group Topic = Essential System Services (ERG #3 prep for presentation) Q - waivers only last 5 years to manage it from a distributor - can we work this with a 5-year timeframe that then considers a handover process? Recommendation (ERG #3 ESSS group)
- Market trend related questions
- Are markets coming online quick enough to address critical needs of society (i.e. climate targets) Can Jemena serve to provide non-mandatory ESS as the market is developing to assist in transition? (ERG #3 ESS group)
- How can quickly test other options in the market through trials? Can you engage technology startups or innovators to provide dynamic systems? e.g. put a problem statement out via an RfP? Work with organisations like Start up Bootcamp? (ERG #3 Group export / demand)
- How much can this be allocated / supported through energy retailer offers? e.g. Tesla is seeking to enter the retail market - this would be an example of being opportunity to work with retailers to manage DER to the benefit of both customers and the network. (ERG #3 Export / Demand)

Appendix B: Fact Check Table

The FACT CHECK table below reflects the questions raised by ERG members.

Who is requesting this information?	What is the data to be sourced / checked?	What guidance can we (Jemena) offer?
Chika	AER's methodology and our position on it (import / export)?	Flexible exports & CCV of Zero export limit We operate in those environments (AER's methodology)
Ruth	Air conditioner is a controlled load. A big issue for import conundrum. Define the types of controllable so that it can be differentiated from customer's needs under different scenarios. E.g. air conditioning is needed during heatwaves versus hot water / pool pump is dispensable. Education / awareness of what EV can generate and support household load. How EV can help load.	How can we incentivise customers to shift load to middle of the day to soak up solar PV? E.g. Free electricity The voltage that are impacted. Redirect to: ESC Voltage Report – Roadmap ERG #3 pre reading paper)
Linda & Tim	Present – "How am I impacted by that?" With batteries What is the message? What is the equity of the change? Where I am in this message to know how I am impacted by constraints.	Education is key - Misinformed public and spread misinformation What is the impact? / Want lower costs What is Jemena's role – leaning on government to support communications / policy Misinformation – false data void filled with rumour & error.
Kellie, Neil	Can the existing static limits be grandfathered in set period and then move to a different limit? Can the existing systems then be retrofitted? If so, what's the cost and who pays for it?	MSO - New verses change / upgrade Policy (order) Flexible export limit AER?) to an extent but who pays Zero export limit Service classification / EDPR F&A

Who is requesting this information?	What is the data to be sourced / checked?	What guidance can we (Jemena) offer?
Kate, Andrew	Could “First come, first serve” be fair? Old: Feed in tariffs verses contribution to grid. New: Contributing to the problem. Is it about intent? Barriers? Does Jemena have enough information to make the decisions? - Have we squeezed as much as we can out of our system to avoid curtailment? (network and non-network solutions) (Understanding customer’s use. i.e. EV or no EV etc) Avoid curtailment conversation Backstop / interim only Are the reg bodies prepared to be proactive? How to get the AER (Conservative / distrustful) to do what customers want? (Does not degrade)	Min demand report. New system – low voltage system monitoring 2 – 3 years Flexible export limits alleviate the need for the backstop mechanism.

Participant feedback for

- Topic 1 Export conundrum - Option 1: When allocating limited export capacity, Jemena **should** apply a "first come first serve" approach

PROS: A GOOD IDEA BECAUSE...	CONS: A BAD IDEA BECAUSE...
Fair to those who already invested	Older solar PV is less efficient
Those who already invested get their expected ROI	May reduce overall levels of export
Simpler process for Jemena	Penalises future customers
No further changes or retrofit costs to existing system	Reduces the ROI for future customers – disincentivises investment
Older systems are smaller and less efficient so generate less	Perceived as bad for Jemena brand
Limits growth / impact of duck curve	Encourages people to hastily invest in solar before the limit is imposed
Encourages self-consumption	Not fair
Encouragers early adopters	Those who can afford to lean into solar ownership are unduly rewarded
It's easier (From a process perspective)	Cements inequality
We don't want to need to curtail. All other options first. More generation without storage makes that more likely.	Curtails further rooftop PV
Dynamic as there is no knowledge of later installers.	Limits ROI
It encourages uptake relatively quickly for the transition.	Disadvantaged if you are later
It encourages incentives from consumers to promote equity and tariffs.	Issue of fairness for underserved groups or vulnerable groups. E.g. If you are financially challenged.
May minimise growth (near to mid-term) growth in network investment and therefore keep minimal price increases.	Who allocates the capacity and how equitable is this process?

PROS: A GOOD IDEA BECAUSE...	CONS: A BAD IDEA BECAUSE...
	Energy not allocated from some pro-consumers. Will be dissipated into the environment adding to the problem of global warming and climate change.

- Topic 1 Export conundrum - Option 2: When allocating limited export capacity, Jemena should not apply a “first come first serve” approach

PROS: A GOOD IDEA BECAUSE...	CONS: A BAD IDEA BECAUSE...
Perceived as more equitable from customers’ perspective	Could slow uptake
Customers may prefer the greater sense of control over their exports	Could make wholesale prices stay higher for longer
Early adopters who can take advantage first would perceive this as fair	Perception in the market about generational equity. E.g. Gen X / baby boomers verses Gen Z / Y
Fairer for vulnerable customers	Could encourage people to install really oversized systems to maximise benefits.
Will continue to encourage to invest in solar as it is still level playing field	Older / established customers feel aggrieved about being penalised after their investment
Allows for continued deployment of rooftop PV – doesn’t create a barrier to deployment	Impacts voltage and Quality of supply for customers
It’s fairer	Limits the total export
Spreads the value of existing capacity to all customers	Impacts our ability to achieve net zero

- Topic 2 Import conundrum - Option 1: Jemena **should** place an import limit on the allocation of controllable loads.

PROS: A GOOD IDEA BECAUSE…	CONS: A BAD IDEA BECAUSE…
Reduces the investment needed in poles and wires	May stall the electrification of household appliances
Encourage consumer behaviour to spread the load; be mindful about toll.	Create demand anxiety (similar EV range anxiety)
Could encourage uptake of more efficient appliances and smart charging of EVs. Smart demand management in households / businesses.	Controllable load may be an essential service
Will force mindful consumption and reduces overbuild of energy generation	Industrial customers may also not electrify their gas consumption
It can encourage load shifting	Some households may not be able to control their load
It will spread load to lower operational costs for all	Penalises EV users
It will help deploy more renewable energy	Penalises those at home during the day / with a disability / special need / unemployed
Moves us closer to better orchestration of CER.	It could impact heath
Good for system / network security during transition	Big brother
Customers may be happy to support the gird with certain appliances E.g. pool pump, air conditioning	How do customers opt out if necessary?
Minimises future network investment and therefore price increases	Disproportionally affects vulnerable customers
Could help to partially resolve the export conundrum. E.g. by encouraging imports and exports and certain times (balance load and capacity on the grid and capacity of rooftop solar).	Customers don't want to be 'controlled' – issue of trust.
Suggestion: Should be a collective policy agreement between DNSPs and government regarding grid load distribution and storage.	May deter customers from adopting CER E.g. EVs

PROS: A GOOD IDEA BECAUSE...	CONS: A BAD IDEA BECAUSE...
	Could erode trust in Jemena and big corporations (and spur conspiracy theories)

- Topic 2 Import conundrum - Option 2: Jemena **should not** place an import limit on the allocation of controllable loads.

PROS: A GOOD IDEA BECAUSE...	CONS: A BAD IDEA BECAUSE...
Electricity is expected to be available at all times. Meets customer / community expectations around convenience.	May result in material overspend / build of transmission /distribution network
It will support customer uptake of EVs, induction, heat pumps etc.	It won't change behaviours or drive efficiencies in use/ appliances / choices
Good for Jemena's brand identity	Near term impact on the network (system security)
Greater trust possible between community and Jemena	We don't know enough about consumer behaviour and what they will do
Encourages more innovation in orchestration and tariffs to give individuals more choice and more tailored energy services.	How would this be done equitably?
Relies on the market to establish a "fair" price	If done via tariffs, customers are already confused by this.
Encourages technology adoption	It doesn't take into account conditions as opposed to units
	Reinforces the current system's problems
	Opens a market to....

Appendix C: ERG feedback on Jemena's response

PLANET
• Alignment of stakeholders
• If not expert, then how do inner city small blocks store to peak? Size problem because ANZ standard for battery occludes siting - to battery on a pole?! (parking space at premium). How to financially share an LV feeder battery?"
• Incentives to reduce cost. Consult and liaise with the government to subsidise cost of grid export on consumers and batteries investment.
• More explicit on specific customer benefits. How these benefits occur over time and link back to longer term planet benefits. Planet benefit can seem abstract.
• Need to ensure that any tariff is consistent across all DNSP's
• Need to technically support set and forget middle of day loads (What protocol, what control for DOE?) – washing. Pool management, fridges - AC reliably operating without overconsumption.
• While pushing trial activities use the emission test through NEO: AEMC/AER to bring regulators along the journey.
COMMUNITY
• Cost. Have more sessions to educate the community / consult with them on cost implications but seek feedback to manage this gap.
• How do we bring tangible examples to life for customers? E.g. If we do a first in, first serve for export, it is not equitable for some, but network investment costs will be lower.

- Put up a technical solution that projects people's privacy, a minimum viable solution / product that can just be applied to provide DOE.
- Define equity. Accelerate cost reflective pricing as an option / add on.

INDIVIDUAL

- Retrospective impact of tariffs. E.g. On customers who purchased PV years ago may perceive to be disadvantaged. Bring to life scenario with a customer benefit lens.
- Education: Provide information on current challenges facing distribution network's ability to incentivise grid export and for more individuals to reach out.
- Rebalance through pricing transparency and simplicity.

ALL

- Education of the Trade-Offs - Tik Tok moment. Not every message sounds positive, but there is an 'importance' to explain why.
- There is no blank cheque, but this is the direction so how do we make people understand why they may pay more?
- How do we solve for our customers to promote for stability of the network and Jemena's strategies?

OTHER

- Provide feedback to support and accelerate renewables by subsidising grid export cost and batteries investment.
- Incentives around: Grid export, network expansion, battery investment.
- 70% of Australia's landmass is arid, providing enough space and capacity for battery production.
- Be outcome focused for consultation meeting. Advice: For panel to walk through trade-offs?
- We need a clear definition of what 'equity' means. We need a clear understanding of Jemena's responsibilities, government responsibilities and customer expectations.

ERG questions about Tariffs:

- What are my options in terms of tariffs? Case studies Interactive experience so you can evaluate change of behaviour.
- What are the costs of imposing tariffs? Are the costs per day admin, or costs to establish now?
- How can we provide DOE automation to all? Set and forget - passive participation - white goods control EV and AC load controls. Advise government to promote.
- Signals 3050. Star rating on goods.
- Adaptable - How to prevent bill shock? (transition buffer?)
- Efficient
- Simple - How do we make Jemena tariffs transparent to people reviewing their retail offer each year?"
- What is the impact of a change of behaviour?
- Explain to me what is best for me?
- No bill shock so how do I avoid it?"
- Can we get localised KWH cost to serve?
- How can retailers and distributors align more on tariffs?"
- Why do we need simplified pricing? Can it be more complex at the back end? To set costs that are reflective for local areas?
- How do you maintain adaptability when reset period is so long?

Appendix D: ERG survey responses about Tariffs

Survey Question	Responses
What is Jemena's role in, and where should it focus its efforts to influence, behaviour change around electricity use? (Pages 15 and 16).	Continuing on, the price differentials could be made sharper if there was alignment with Retailers incentives.
	It appears that the tariff differentials have not been sharp enough to outweigh customer's lifestyle preferences.
	Regarding more or less emphasis on Vic DNSP wide preferences versus Jemena customer preferences: As much as possible key principles and elements of the tariff structures are best aligned Vic wide. The actual values of individual tariff elements (either kw per hour or fixed charges) may vary across Vic DNSPs according to say JEN customer expectations.
Pricing Principles: Consider the draft tariff principles and prompt questions on page 17, any observations/comments you would like to make?	An observation is that the Adaptable Principle refers to future network configurations and emerging technologies. I think it's valuable to insert the customer into this Principle, by referring to tariffs being adaptable in light of relevance to how customers choose to use the emerging technologies.
What are the most pressing issues that tariffs need to address?	Export charges will be seen by customers as a 'blocker' to the low carbon energy they're producing (similar to the EV road user charge issue). To avoid a political mess will require very careful messaging and buy-in from key stakeholders.
	Tariffs need to align with factors that drive costs, i.e. cause the need to relieve congestion, (Consumption or Export).
	With factors that drive costs, i.e. cause congestion.

Survey Question	Responses
	Tariffs need to align.
	An over-investment in the network to facilitate the customers' needs. In this case there needs to be a strong focus on equity.
	The most pressing issue is ensuring the long-term efficient operation and use of electricity services. The best theoretical outcome to achieve efficiency is that customer behaviour responds diligently to the incentives the DNSP's propose. It must be recognised that customers may choose their own priorities about when they will use these services. If a customer prioritises their lifestyle needs over say the efficient time to use these services, we may not end up with the most efficient network operation.
Do you have any comment on the new tariffs?	I think the new solar soak tariff is a great initiative. The proposed export charge/reward tariffs are establishing appropriate incentives. As these tariffs are only 'opt-in' for the next reg period, will there be differing fixed charges for 'opt-in' and 'opt-out customers?
What are the benefits for small and medium business customers to have their own separate tariff categories?	I think the same approach as with Residentials is appropriate, unless the engagement with these customer groups provides some greater insight into any need to adopt different principles.
Do you have any changes to the SDIC's current form? Are there any changes you'd suggest? **What, if any, suggestions or changes do you have for site-specific tariffs?**	While the large businesses still cause summer peaks the SDIC seems appropriate. Moving all sub transmission customers to site specific tariffs seems equitable, considering the proportion of assets used to supply these customers.

Appendix E: ERG comments about Jemena's proposed presentation

Investing in the Network
• How much are you externally insuring versus internally wearing the risk? There is a strong risk of underinsurance in face of unprecedented conditions.
• Investment toolkit: other options – E.g. energy efficiency. Not something specifically controlled by Jemena, but perhaps advocacy?
• Just a little tighter in the wording for these along the lines of what Jemena can do, what and how you can invest - almost a cheat sheet with an example such as the car - things people can relate to so they have context.
• Include constraints - some are regulatory, where is the opp to influence :) Especially tariffs.
• Context what can they influence what they can't. Root of regulator and role of government policy. What can they influence, what they can't.
• Invest in the network (to maintain and improve it).
• Present a short list of what are the key assets that could be invested in, the scale of investment, and the carbon impact of each of them.
• On this side I would lift up the VALUE of services you deliver.
• I would say fast or slow not too late if I'm reading this right.
• Give examples of OPEX, depreciation, small example that helps understanding.
• Humanise the examples as much as possible. Create small stories about what it means to invest in fault detection or fit for purpose assets as balancing that with "potential" futures that may or may NOT occur.
• Re investing in data centres - perhaps this is also a good time to touch on the ongoing digital transformation / change required to embrace the energy transition. The broader net zero agenda will resonate - so linking the change to this could be useful.
• What is the RISK for the consumer? Would it be stranded assets or just more investment than necessary to trigger the change?

- What is the lead time for each of these decisions?
- What's too late mean? What's the impact if too late?
- Explain the challenges, constraints, pros and cons of investing in the network and collect feedback from panel, making them aware of the implications of each decision so when the decisions are made, they are properly informed.
- There is a point re the timing of investment but also a point about the nature of investment - E.g. What is the strategy and why? What is it working towards? (E.g. net zero, laying foundations, enabling consumers to transition etc.)
- Who pays for data connections? I think they do and it reduces consumer bills?
- Re the data centre comment - note that this was added thinking that data centre connections referred to Jemena's data centres, rather than customer data centres.
- You could add for example: with the new Vehicle Fuel Efficiency standards, the supply (and range) of electric vehicles is going to massively increase, and with it, the demand uptake for electric vehicles.
- You could also explain that these additional data centre loads are good for all customers as they help to pay for more portions of JEN fixed costs.
- What are other jurisdictions doing where there is a concentration of data centres?
- Lux 1 = Black Swan and explain analogy :)
- Growth in UPS demand in data centres - what is required to alleviate peak demand with this type of load?
- What is the payoff of batteries to reduce peak demand versus transformer aging at peak demand?
- Proportion of customers using export services.
- Not just a matter of early or too late, but also the right amount of investment.
- Have you defined risk in this presso?
- We spend YOUR money running the network

Running the Network

- The risk profile graphs are not very obvious unless you work in risk.
- Practical example here (at challenges/working out spend).
- Just be careful about prudent and define that. Efficient is self-explanatory however, prudent is subjective.
- Making sure the third actor (Regulator) who is not in the room is considered.

- It might be worth while talking about Prudent and efficient !! – i.e. you get to ask for think BUT the regulator may say no or change too because it's not prudent or efficient or they don't think there is sufficient support.
- Be careful of data security. This is becoming viewed as license to operate as opposed to a nice to have.
- Is data security opex or capex?
- May need to be prepared to answer questions about what data is collected and how it is managed / shared etc, in particular, as the Consumer Data Right is implemented.
- Possibilities given greater data availability and analysis, and the benefits this can deliver for the grid and / or customer, may also be helpful - balance the data security / privacy considerations and opportunities / benefits from data and greater digitisation etc.
- Adaptable for who?
- What depreciation for OPEX?? What do you DO for the operating expenditure?
- Good example is tree clearing, simple to appreciate.
- Car example is a good one - something everyone can understand.

Tariff Types

- Good to talk about revenue caps.
- Led into this with a revenue cap.
- Do you need to talk about BEL (curve?) here?
- Cost reallocation to services.
- The example shown of cost divided by consumption to achieve a cost per kw/hr should be framed as how tariffs have historically been derived. Then pose that this is not the way in the future.
- The solar export charge reveal is going to ripple a disruptive wave of comments when you bring it up.
- Value of self-consumptions vs cost of injection.
- Probably put the self-consumption value versus the export value before you reveal the statewide export tariff slide.
- Use in solar sponge to export charge disappears.

Appendix F: ERG responses to People's Panel Questions

BATTERIES: How do we commercialise the uptake of batteries?
◆ Is this about incentivising (solar) customers to install their own batteries? This would be a good outcome if tariffs are set appropriately or incentivising customers?
◆ Stimulating enviro for more batteries?? Ausgrid has one - battery tariff.
◆ What do you mean by commercialising - is it tariff for investment? If so, then tariffs play a part to incentivise optimal use of the battery
◆ Need to be clear on what we mean by commercialise - is this about getting an appropriate return on costs?
◆ Is it community batteries I assume?
◆ Commercialise what is this "aren't" these non-network solutions and ringfenced.
BATTERIES: What can Jemena do in relation to providing more 'community batteries' to help them control fluctuations in supply?
◆ Placement of the batteries before or behind the meter changes the value stack The Economics of Battery Energy Storage - RMI (https://rmi.org/insight/the-economics-of-battery-energy-storage-how-multi-use-customer-sited-batteries-deliver-the-most-services-and-value-to-customers-and-the-grid-executive-summary/)
◆ Value stacking - it might give you other services - if gives multiple then maybe want network to own. i.e. voltage and resilience as an example.
◆ Commercial viability - control / remit.
◆ What can Jemena do? What does industry need to do? Others can provide these services in a market - not necessarily Jemena.
◆ Need to contextualise demand manage as = to battery! Focus on service, not asset.
◆ Clearly prioritise and be transparent about the solutions that these batteries will provide.
◆ Benefits of investment in batteries need to outweigh benefits of other solutions that can control fluctuations in supply.

- Technology neutral batteries to solve voltage issues? What about storage? Purchasing non network solutions and battery is just one tool in the kit - it could be a load centre or a data centre.
- Is this question how do you bring non network solutions voltage issues (of which batteries could be one)?
- Why do you need them? What alternatives? This is a non-network solution. How to bring this?

BUSINESS CUSTOMERS: Are the interest of the larger customers such as business owners equal to or less than the interests of residential customers?

- Different needs.... despite proportion (contextualise).
- Equal but different!!
- Business customers that provide a critical service or are at material risk (safety/operational) where there is a loss of power (similar to life support customers) needs should be prioritised.
- Life support customers are prioritised.
- The interests should be equitable but have different needs and demand profiles.

BUSINESS CUSTOMERS: What business are there that Jemena can attract to consume the excess solar energy? (To offload the burden from residential houses)

- However DNSPs are not set up to manage commercially facing/bespoke arrangements at the moment. Non network solutions are possible through bilateral arrangements - perhaps this should be a market?
- Trucking fleets (E.g. Global Express).
- Public transportation.
- Bus fleets that converted to Electric vehicles.
- 24/7 operating companies with large loads.
- Any large load that operates 24/7.
- Chemical production companies.
- Water companies.
- Manufacturing companies.

SUSTAINABILITY: Accessibility of renewable resources across all households and small businesses - How (and by who) can this be addressed?
◆ Not all properties are suited to having their own solar PV, i.e. Apartments. In the future the easiest way to access renewable generation is through retailer green power offerings, i.e. supply from the large scale solar and wind farms.
◆ Ambiguous question, goes to role.
◆ Jemena needs to provide the backbone for supply to be technology agnostic in an economically efficient manner.
◆ Government programs address this.
◆ Is the question: Financial, ownership based, etc?
◆ This question is very vague and broad - it is difficult to address without greater clarity.
◆ The supply chain of providing renewable energy stretches across the supply chain and there is no ONE section that can ensure accessibility. The government might be able mandate through policy?
◆ This is not just a DNSP issue - it is a whole of supply chain issue - and includes government and retailers.
SUSTAINABILITY: Are batteries in the grid and EVs a sustainable solution? (in terms of battery life span, what happens at the end of their life and lithium availability?)
◆ Cheaper EVs are shifting to sodium batteries.
◆ Offering a recycling service?
◆ Which batteries are you talking about? Clarify.
◆ Batteries and EVs are sustainable in terms of reducing reliance on fossil fuels. However, the whole of life carbon impact needs to be considered (inc. recycling schemes, and sourcing, supply chains etc.)
◆ Two questions (EV home batteries vs community batteries) and regarding end of life. What is the network responsibility? Are you offering a recycling service information etc? Should network be advocate for product stewardship?
◆ Cheaper EVs are shifting to sodium batteries.
THE REMIT: As it stands what does the group see is the biggest breakdown of contributing variables that will achieve / prepare for a sustainable future of a growing grid? E.g. solar vs battery vs doubling grid infrastructure.
◆ Missing consumer guidance and market incentives for effective load controls on new whitegoods to enable solar soak, and quick response to supply fluctuations.

- Will need a combination of strategies. i.e. technology to enable the most efficient use of the network capacity, some additional investment in the grid hardware to ensure 'firm network capacity' and resilience, incentivising the efficient operation of customers solar PV and vehicle charging.
- There is no RIGHT or WRONG answer, indecision is the worst pathway forward.
- No silver bullet.
- Will require a host of solutions!
- Missing framework for intersection of investment incentives and regulatory framework.
- Distributors cannot currently store energy and arbitrage when required according to regulator's current constraints, but that is what is required to align the demand with supply.
- Enabling equity for end use consumers.
- Future stability at fair cost.
- Expenditure and strategies to achieve the new environmental objectives, enabling low carbon energy, i.e. what is efficient expenditure and pricing/tariffs adapted to incentivise customers.
    - 1) Lack of alignment of regulatory, policy, advocacy and standards frameworks to support necessary cross sector collaboration between retailer, consumer, generator, supplier.
    - 2) Balancing consumer expectations with commercial realities.
    - 3) Integration of storage for renewable generation at a reasonable cost.
- Missing consumer guidance and market incentives for effective load controls on new whitegoods to enable solar soak, and quick response to supply fluctuations
- Automating demand to meet renewable generation.
- Regulatory constraints – E.g. distributors not allowed to own batteries.
- Key thing is efficiently matching demand to supply in both consumption and export whilst allowing self-determination by customers, and without overbuilding the network.

Appendix G: ERG advice re data management

Question	Comment
What criteria should be used to determine if data requests are to be granted and who should bear the cost?	Call it Morely Chat
	Can Jemena provide an AI interface for the publicly available data, or for how to analyse the available data?
	Community v Commercial is a consideration
	Differentiate between manipulating public data and pulling data that is not public ally available, and the public good of the how the results are being applied.
	Does it expose Jemena to Cyber-attack as a result of sharing the data
	Don't put the fee on the data, put the fee on the service of providing the data. Charge for the time.
	Fees for specific bespoke services (similar to AEMO connection agreements)
	Fees for specific requests (e.g. ASIC requests) Or ABC data or Land title fees data
	Frequency and duration of data requests
	How do we know that persons are not asking so that they 'backdoor' due diligence on Jemena
	How will / could the data be manipulated?
	I find the stuff that is already online DJPR and the JEN VIEWER etc to solve problems myself.
	If it stops Jemena in their day-to-day duties, then there should be a cost for this - subject to any community considerations
	Intended end use of data request

Question	Comment
	Is the data going to be on sold or has it got the potential to be on sold
	Level of complexity, value to the network & customers vs individual / company value
	Need to monitor the types of requests you are receiving.
	Ongoing integrity and reliability of data once it is accessed, manipulated etc.
	Price scaled on type of client - Not for Profit, Govt, Company etc..
	Sensitivity/ confidentiality of data requests
	The client asking for the data should be paying for it
	This level of data analysis would normally incur quite a substantial charge from an engineering analysis group - why should Jemena just absorb the cost of analysis/
	Time and resources required to extract data requests
	Viv Govt could provide a suite of basic data requests that each DNSP must provide, hopefully Jemena are contributing to the current Vic Govt/AER project.
	What the level of information that the client needs - scaled price proportion to analysis involved.
	Who is asking? E.g. government, universities, individuals, overseas entities
What advice would you give to Jemena about security of the new system platforms?	Co-design the security with the other DNSPs in Victoria and with the experienced DSNPs overseas.
	Companies are constantly being impacted by Cyber-attack (Comm Bank have @17000 per day) so see this as a long-term investment in protection rather than just an expense
	Compartmentalise and simplify and harden as much as possible
	Continue to evolve cyber maturity in line with increased digitisation.
	Educate employees and customers on their role in cyber security
	Ensure you comply with SOCI standards and if possible, aim to stay ahead of the required standards

Question	Comment
	Industry and industry bodies need to share knowledge and learnings
	Leapfrog off the experience and mistakes of those who have already done this. Do an inhouse review of how others have done this overseas.
	Learn from other DNSPs who have already undertaken this. Learn from other industries who are further along the curve
	Understand specific risk from an asset, data, customer etc perspective and target investment based on risk
	We have the passion, they have the experience, use the interface between rather than relying upon the external to drive the performance
	What are your criteria of success?
	You need inhouse expertise and communities of practice with US EU and other Au DNSPs.
Do you think DNSPs are spending too much (or too little) on Operation Technology security?	(technically naive question) Should the OT remain in an DMZ but the data be shared?
	Compartmentalise and simplify and harden everything you can
	How much are you spending? Hard to judge this in the absence of data
	How would we answer this?
	I'm concerned about the shift from DMZ to open
	Risks versus consequences - what are the penalties for being the source of system failure?
	What are the current industry benchmarks? How high is the threat?
	What are the risks versus benefits of spending too much, if the benefit is taken away, how much would it cost you?
	Within your risk frameworks, have you mitigated your high impact or high probability risks?

Appendix H: ERG Feedback on Draft People's Panel Recommendations

PP Draft Rec Title	ERG member comments
Draft recommendation A. Equitable Tariff Reform	▪ Are there trade-offs with sub-point 3 e.g. where the distributor benefits now, but customers may benefit later ▪ Clarify intent behind mandatory export tariff comment ▪ Comment: Clear understanding of the relationship between distributor and retailer tariffs is vital for reform, as is coordination across distributors (and other stakeholders in the value chain) ▪ Consider the Retailer's role in addition to distributor and customer in sub-point 3 ▪ Provide a more complete explanation about how export tariff comment fits within Equitable Tariff Reform (sub-point 2 seems a little inconsistent with sub-points 1 and 3) ▪ Would batteries change the perspective on export tariffs?
Draft recommendation B. Corporate responsibility - addressing sustainability /carbon footprint	▪ Ideally the normal asset replacement cycle introduces more sustainable technologies over time ▪ This seems like a straightforward recommendation ▪ We expect that there will need to be a trade-off between investment in sustainable technologies and the cost impact that customer's may incur.
Draft recommendation C. Network Reliability and Resilience	▪ Consider non-augmentation solutions to improve reliability and resiliency ▪ Is there a role for more local solutions e.g. batteries, substation improvements to improve reliability and resilience? ▪ Trade-offs between cost and benefits to achieve desired levels of reliability must be had

PP Draft Rec Title	ERG member comments
	▪ We wonder about solutions that are outside of regulatory rules e.g. utilising power stored in community batteries, aggregator models - discuss further
Draft recommendation D. - Digitisation and automation to increase economical reliability	▪ Agree that technology and data should be used to driver greater efficiency and asset utilisation
Draft recommendation E. Allow Storage by Distributors	▪ Allow distributors utilise / export community battery energy to the network
Draft recommendation F. Customer Education	▪ Succinct and clear messaging so seems pretty good in what is written ▪ This compliments recommendation O, two sides of same coin, maybe merge?
Draft recommendation G. Jemena to maximise green energy within their focus	▪ Agree with direction however this could be covered through other recommendations for example B ▪ Consider whether this is distinct from B, or E, J, L and N.
Draft recommendation H. Collaboration to ensure efficiency	▪ Are you pointing to the tariff coordination across all Victorian distributors to ensure the retailers pick it up? ▪ Collaboration on efficiency welcomed ▪ Coordination to ensure efficiency ▪ Could collaboration become Coordination (??) ▪ Might be difficult to collaborate on price/tariffs for ACCC
Draft recommendation I. Equitable Tiered Tariffs	▪ Define users so that you might be able to differentiate equitable tariffs ▪ Similar to Recommendations A and M? ▪ Solar / No solar, Residential versus Commercial, Financial capacity to invest, Owner / Renter? ▪ What do you mean by 'equitable'?

PP Draft Rec Title	ERG member comments
Draft recommendation J. Creation of Battery Incentives for customers.	▪ Consider similarities with recommendation E and N ▪ Equitable? Or opt in? ▪ Extending the Jemena infrastructure requires these batteries to be 'deployable' on a system wide signal ▪ Similar to solar tariff on recommendation I
Draft recommendation K. Long term sustainable operation of the grid network / infrastructure	▪ No comments
Draft recommendation L. Jemena incentivises/promotes off-peak EV usage.	▪ How would this work from Jemena's role? ▪ If it's vehicle to grid - should there be information about when to discharge? ▪ Is it for off-peak energy use, not just EVs? ▪ Is this about encouraging EV uptake or about increasing best value energy use? ▪ Is this just for EVs? ▪ Should the same apply to home infrastructure, not only public charging stations?
Draft recommendation M. Implement and Explain Transparent Tariff Structures	▪ Does Jemena play a support or a lead role here? ▪ Is this the role of the retailer or the network? ▪ Very well written ▪ Where can the network add value to this conversation, given the bill comes from the retailer?
Draft recommendation N. Jemena advocate and plan for solar panels with energy storage solutions (e.g. batteries.) in all greenfield building developments.	▪ Consider demand response – much, much cheaper than batteries to provide responsive energy ▪ More clarity on this - is it just solar and batteries? Is it about creating equity for all buildings? ▪ Should it be technology agnostic? ▪ Should Jemena be determining the technology or optimising opportunity for everyone? ▪ This question needs more clarity: What is the objective?

PP Draft Rec Title	ERG member comments
	▪ What is the intent behind this? ▪ What outcome are you looking for? ▪ Why?
Draft recommendation O. Efficient and accessible communication from Jemena to customers	▪ Customer engagement e.g. using strategies like the People's panel is a strategy, in addition to newsletters, email or phone communication. Also there should be different types of communications for different purposes, which Jemena is already on track of. ▪ The only time most residential customers interact with Jemena is when there is a power outage - are there more proactive ways of communicating with them? ▪ What does successful mean to you? ▪ What type of communication? Apps? Texts? Proactive engagement and education?
Draft recommendation P. Ongoing service excellence to Jemena customers	▪ Define customers - residential customers don't directly interact with Jemena ▪ Jemena should think of future services and latest technology. There should be a vision of what defines success in Jemena. ▪ There should be more clarity on who are Jemena's customers: what is the focus area? ▪ Think about future services? ▪ What defines success for Jemena and their customer interface? ▪ Where is the expectation in terms of customer focus

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PLEASE NOTE:

This report has been prepared by MosaicLab on behalf of and for the exclusive use of Jemena Electricity Network. The sole purpose of this report is to provide Jemena Electricity Network with materials produced at the Energy Reference Group sessions between October 2023 and April 2024.

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MosaicLab is a Victorian-based consultancy that specialises in community and stakeholder engagement, facilitation, negotiation, strategic planning and coaching.

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