

Consumer Advisory Panel Meeting 30

Thursday, 24 August 2023

Acknowledgement of Country

We acknowledge the Traditional Owners of the land on which we meet and pay our respects to their Elders past and present. We extend that respect to other Aboriginal and Torres Strait Islander people who are present today.

Agenda Outline

1. Welcome + Acknowledgement of Country
2. General updates and action items
3. Energy Charter
4. Transmission Annual Planning Report (TAPR)
5. Are AEMO's demand forecasts too low?
6. Demand Management Innovation Allowance Mechanism (DMIAM)
7. CAP Annual Report + Other Business
8. CAP Only Session: Forward Planning / Annual Reporting

Close & lunch



Consumer Advisory Panel 2023

 **Business SA**
Chamber of Commerce
and Industry South Australia

 **SACOSS**
South Australian Council
of Social Service

 **EUAA**
Energy Users Association of Australia

Mark Parnell
*Individual Consumer
Representative*

Mark Henley
*Individual Consumer
Representative*

General Update & Action Items

#	Action Item	Status
1	Provide the CAP with a briefing on the State Government's Hydrogen Strategy (from previous meeting)	In train
2	The CAP to consider whether it requires further advice on the distributional impacts on solar and non-solar customers of network investments, or other relevant matters	Question for CAP
3	CAP Members to provide any further feedback on the demand outlook and rate of growth ElectraNet is seeing, or on the renewable supply options or network options being developed in response in the TAPR Update	Addressed at current meeting
4	ElectraNet to engage with Vikram Kenjle on his potential role in supporting the DMIAM program	Addressed at current meeting
5	Include DMIAM on upcoming CAP Agenda and engage further to determine how the CAP can be involved in the process	Addressed at current meeting

An introduction to the Energy Charter

Leanne Muffet

Independent Facilitator

Simon Appleby

Head of Corporate Affairs

Presentation for information & general discussion

NOTE: Preliminary discussion which remains subject to consideration by Board and Management

Key questions for consideration:

- 1. Should ElectraNet consider Membership of the Energy Charter?*
- 2. What is the interface with the CAP?*
- 3. What other factors should be considered?*



What is the Energy Charter?

- A CEO-led coalition of like-minded energy organisations with a shared purpose and passion for customers and communities
- AIMS:
 - keep humans at the centre of the design and delivery of energy solutions
 - navigate the changing needs of customers and communities as we transform to a cleaner energy future
- Established in 2019 and open to firms across the energy supply chain
- Supported by a team of three women with energy and engagement expertise
- Governance includes national CEO Council Executive and CEO Council plus Working Groups

Energy Charter Purpose and Vision

*Our **Purpose** is to empower one another across the energy supply chain to deliver better energy outcomes for customers and communities*

*Our **Vision** is that together, we can create a better energy future for all Australians*



The Energy Charter's Five Principles

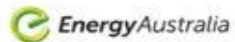
Full signatories commit to annual public reporting on their delivery against the principles with their Customer Panels through a Disclosure Report and Feedback Summary Report



Energy Charter Principles

Current Members

Full Signatories



Collaborators

- Marinius Link
- Powershop

What is involved in Membership?

Collaborator

- Involvement in collaborative projects and initiatives

Current Energy Charter Projects and Initiatives

- ✓ Priority #BT [Landholder and Community Social Licence](#)
- ✓ Priority #BT [Cost of living - Concessions Awareness + Engagement Campaign](#)
- ✓ Priority #BT [National Customer Code to Knock to Stay Connected](#)
- ✓ #BT [National Customer Code for Energy Brokers, Consultants and Retailers](#)
- ✓ #BT [National Customer Code for Energy Comparators and Moving Services](#)
- ✓ #BT [Biodiversity + Renewables](#)
- ✓ #BT [Community Capacity Building, Voices for Power](#)
- ✓ #BT Life Support Customers
- ✓ Community of Practice - [First Nations Community Engagement](#)
- ✓ Community of Practice - [Know Your Customers and Communities](#)
- ✓ Community of Practice – [Resilience](#)

Full Signatory

- Involvement in collaborative projects and initiatives
- Involvement in CEO Council to guide priorities for collaboration and strategic leadership
- Annual disclosure of delivery against the five Energy Charter principles through:
 - Disclosure Report
 - Feedback Summary Report

Q1. Should ElectraNet consider Membership of the Energy Charter?

Key Considerations

Potential Benefits of Membership

- Greater demonstration and focus on delivery of initiatives for improved customer outcomes
- Opportunity for involvement in shared workstreams and initiatives
- Opportunity to help shape shared agenda through participation in CEO Council
- Deeper engagement with leaders in the business on customer centered thinking
- Access to tools, resources and networks for broader engagement

Potential cost impacts of Membership

- Annual Membership Fee (\$35,000)
- Resource commitment for annual reporting and coordination of initiatives
- Involvement in CEO Council
- Engagement of leaders across the business in initiatives and working groups

Q2. What is the interface with the CAP?

Q3. What other factors should be considered?

ElectraNet's Transmission Annual Planning Report (TAPR)

Brad Harrison

Network Planning Manager

Transmission Annual Planning Report Update

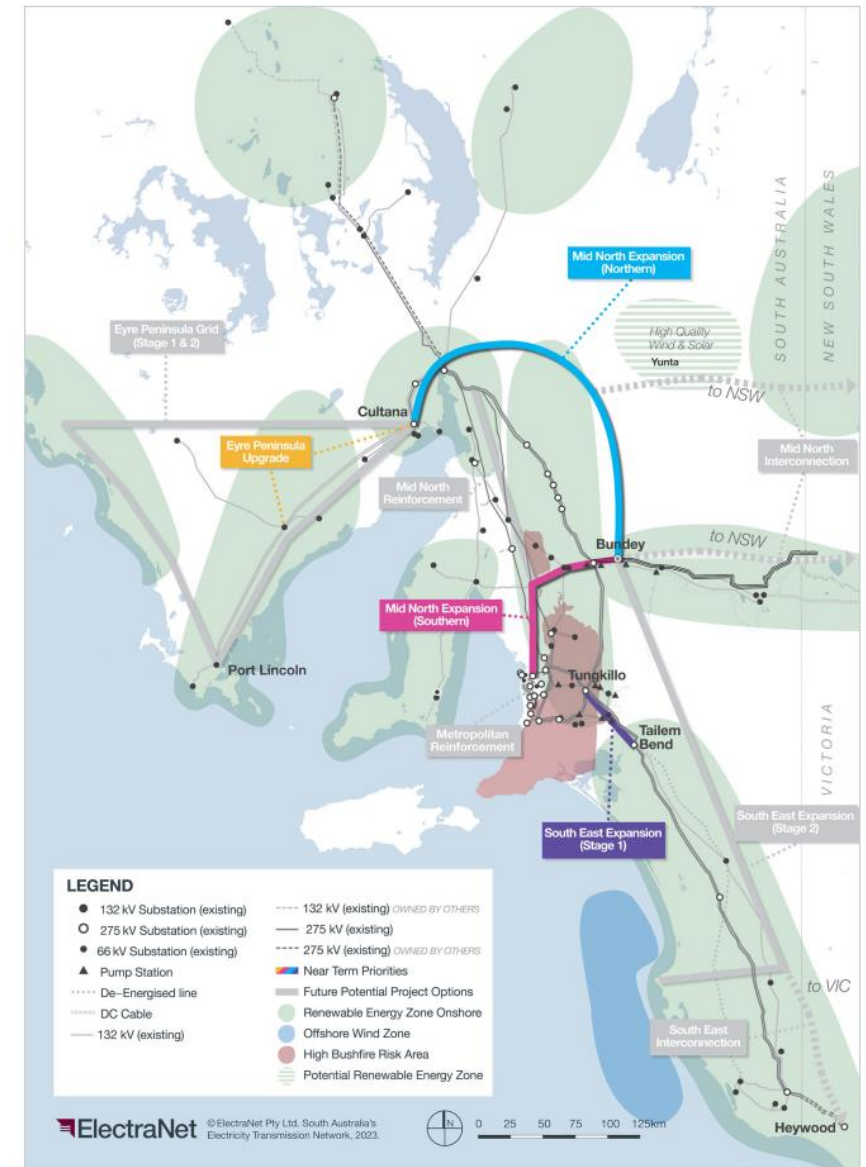
- Two submissions received from miners in the Braemar region around Yunta
- Submission received from hydrogen and renewable developer

Timing of project options in 2022 ISP

Project Option	Step Change Scenario	Hydrogen Superpower Scenario
South East	FY 2029	FY 2026
Mid-North (Southern)	FY 2034	FY 2029
Mid-North (Northern)	FY 2041	FY 2029

- AEMO will update need and timing of near-term priorities in:
 - Draft ISP December 2023
 - Final ISP June 2024

Figure 1 Project options to meet future supply requirements in South Australia



Update on need for near-term priority projects

South-East

- Recommend actionable status in ISP for stage 1
- Growing connection interest and network constraints in the region (exceeding stage 1 and stage 2)
- 3 proposed wind farms which each reach or exceed current capability of the Heywood interconnector

Eyre Peninsula Link

- Regulatory Investment Test for Transmission (RIT-T) to commence
- Prefeasibility load inquires totaling 1,550MW plus 3 GW Amp energy
 - Includes first hydrogen facility at Port Bonython

Mid-North (Northern)

- Priority for further investigation
- Ongoing activity from Braemar magnetite miners
- Emerging supply arrangements for Port Bonython hydrogen with generation at Bunday

Mid-North (Southern)

- Recommend actionable status in ISP
- Preparatory works identified reconfiguration works around Brinkworth and Templers West

AEMO's Inputs Assumptions and Scenarios report

Green Energy Exports Scenario




Strong action decarbonisation activities domestically and globally to limit temperature increases to 1.5°C

Step Change Scenario

A scale of energy transformation that supports Australia's contribution to limiting global temperature rise to 2°C and maybe compatible with 1.5°C depending on actions taken by other sectors of Australia's economy.

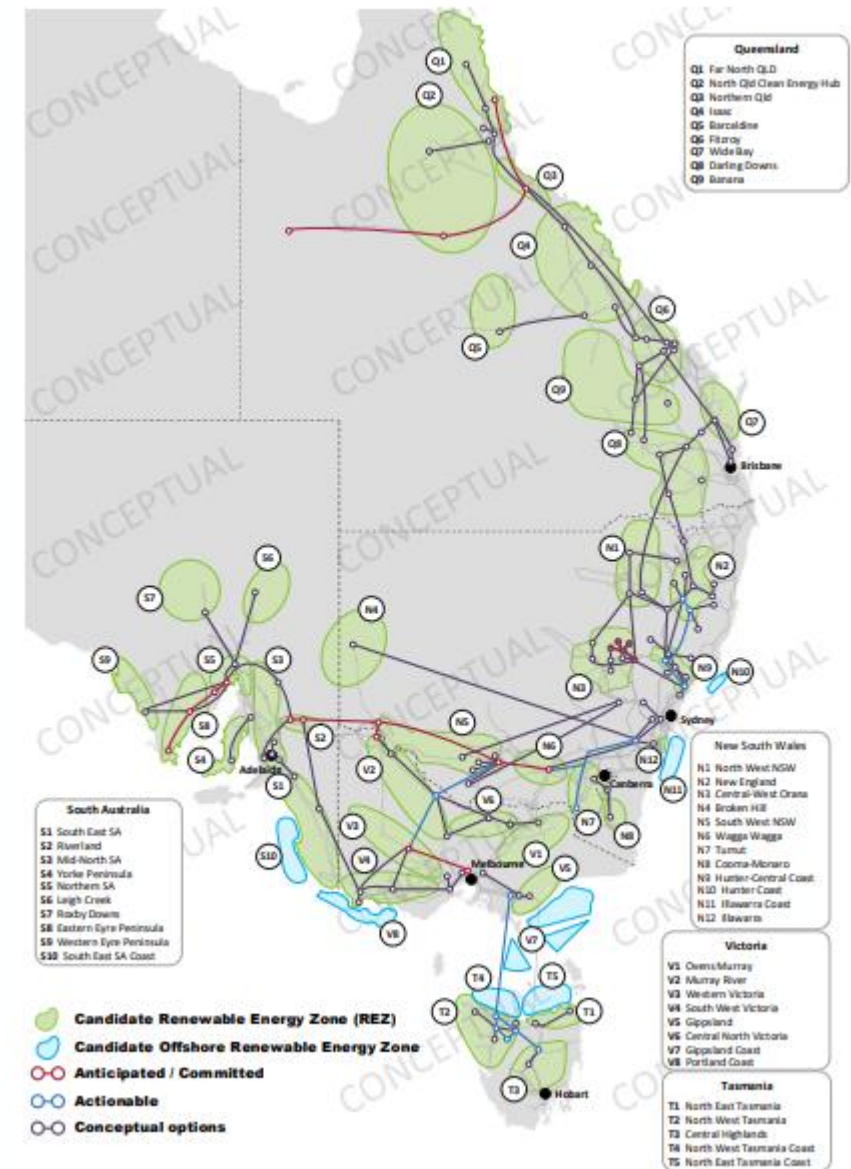
Progressive Change Scenario

Meets Australia's Paris Agreement commitment of 43% emissions reduction by 2030 and net zero emissions by 2050

	Reference value for scenarios	 Green Energy Exports	 Step Change	 Progressive Change
Electrification and energy efficiency savings				
% of road transport that is EV	2022-23: <1	72	60	32
% of residential EVs still relying on convenience charging	2022-23: ~75	38	46	56
Business electrification (TWh)	Max. potential: 41 ^A	36	25	20
% increase from current business consumption	n/a	26	18	15
Residential electrification (TWh)	Max. potential: 12 ^A	9	9	6
% increase from current residential consumption	n/a	16	15	11
Energy efficiency savings (TWh)	n/a	41	36	26
Underlying consumption				
NEM underlying consumption (TWh)	2022-23: 193	345	299	230
Hydrogen consumption (domestic) (TWh)	2022-23: 0	50	28	15
Hydrogen consumption (export, including green steel) (TWh)	2022-23: 0	183	7	0
Total underlying consumption (TWh)	2022-23: 193	578	335	246
Supply				
Distributed PV generation (TWh)	2022-23: 24	92	77	45
% of household daily consumption potential stored in batteries	2022-23: 1%	22%	21%	3%
% of underlying consumption met by CER	2022-23: 12%	16%	23%	18%
Share of electricity emissions in economy-wide emissions (NEM states only)	CY2021: 36%	1%	1%	9%
Estimate of NEM emissions production (MT CO ₂ -e)	CY2021: 132	2	1	22

AEMO's Transmission Options Expansion Report

- Primary purpose of the Integrated System Plan is to coordinate transmission and generator investment
 - Lots of options
 - Only the best options pass the cost benefit analysis
- Cost estimates have been updated to reflect supply chain constraints and global competition for electricity infrastructure assets
- Transmission costs are expected to continue increasing beyond the rate of inflation



Looking ahead – emerging drivers

Transmission Network Voltage Control

- RIT-T commenced in December 2022
- Completed second round of questions for non-network solutions
- Likely to determine a hybrid solution of reactors and BESS operating under grid support agreements
- Project Assessment Draft Report expected in September

System strength

- Likely need by December 2025 for 3 additional synchronous condensers
- Expected to commence RIT-T in September

Emerging network constraints

- Taillem Bend transformers
- Robertstown transformers
- Roseworthy/ Gawler East residential expansion
- Western Suburbs large industrial load expansion

Climate Change

- Bushfire risks to transmission through Adelaide Hills
- Reducing energy supply from Torrens Island and Lefevre Peninsula

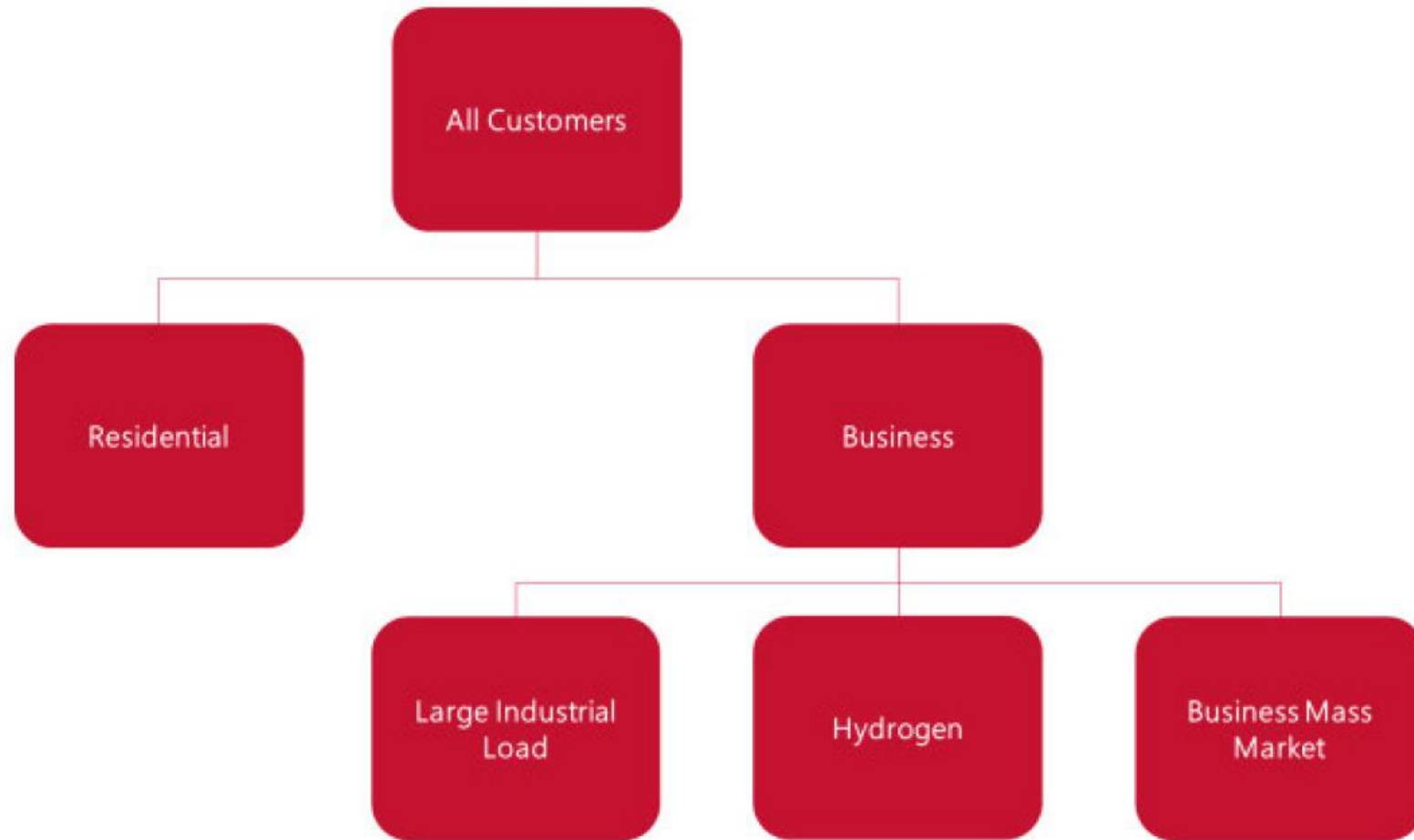
Connections

- Scale of projects is increasing
- 3 projects potentially increasing size of largest generator contingency in South Australia
 - Largest generator contingency in SA is currently 273 MW
 - National Electricity Market (NEM) limit is 750 MW
- Load projects increasing the size of the largest load contingency
 - Largest load contingency in SA is currently 180 MW
 - NEM limit is 500 MW
- Increasing the largest generator and largest load contingencies means the system must be planning to withstand these larger potential disturbances

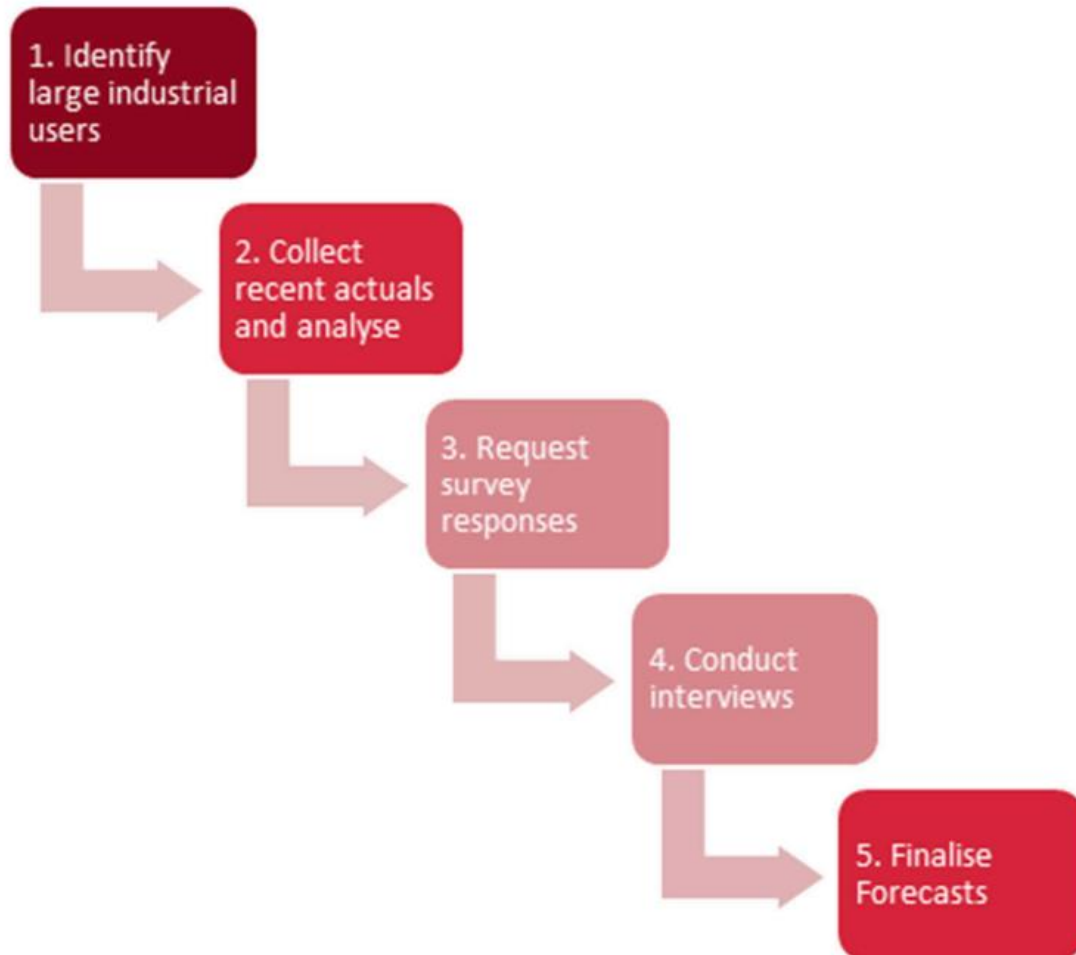
Are AEMO's forecasts too low?

Jeremy Tustin
Manager Regulation

Are AEMO's demand forecasts too low?



Are AEMO's demand forecasts too low?



Relying on committed large loads identified by surveying existing players:

- Understates the potential contribution of known loads
- Misses the 'unknown unknowns'

Survey approaches are inherently problematic

- Who answers the survey?
- What is their approach to uncertainty?
- Return rates are typically sub 30%

Are AEMO's demand forecasts too low?

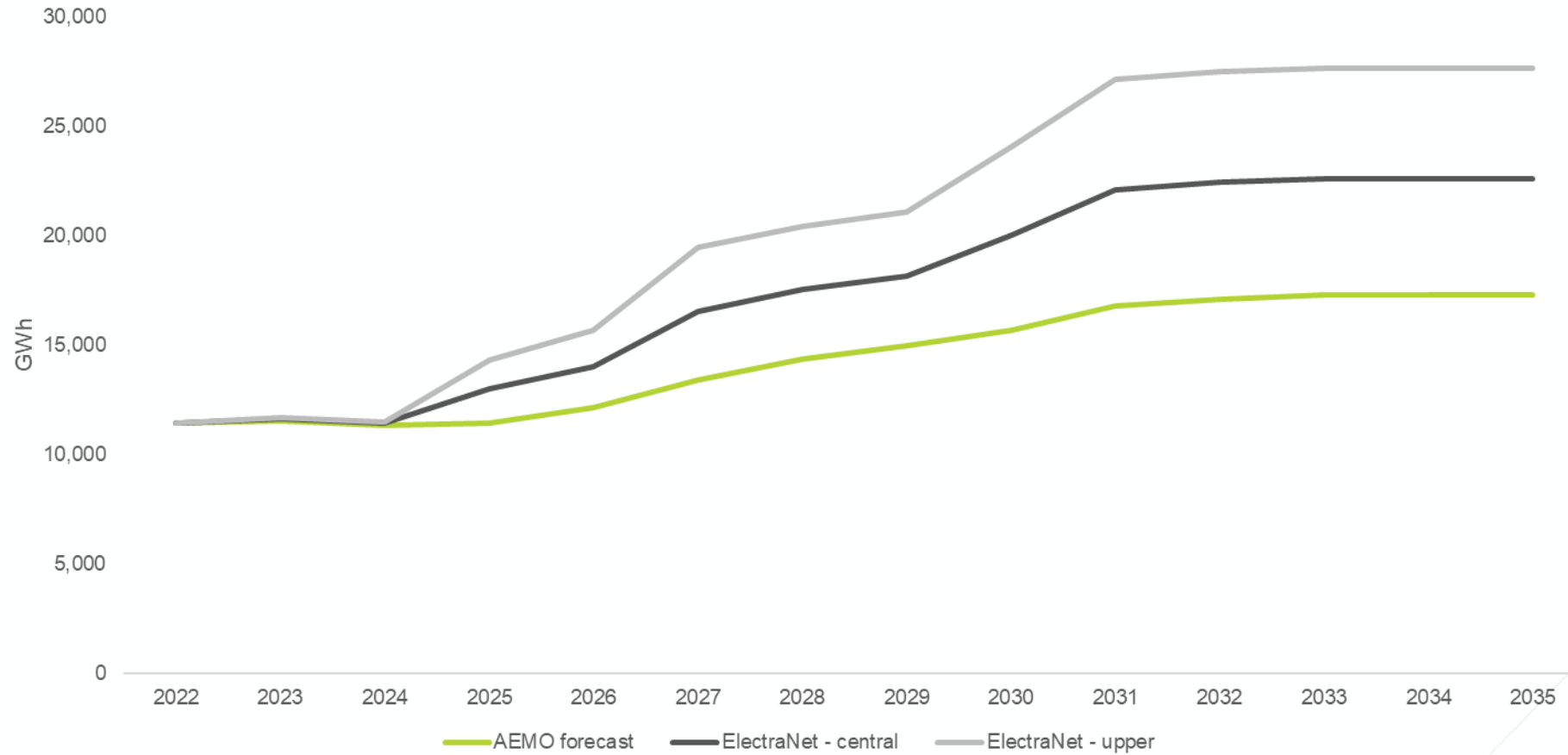
Project	MW	GWh p.a.	Start date	Probability	Weight	Central scenario GWh p.a.
A	20	114	2023	High	75%	86
B	180	1,104	2025	High	75%	828
C	111	632	2025	High	75%	474
D	180	1,025	2025	Low	15%	154
E	100	657	2026	Medium	50%	329
F	30	171	2027	High	75%	128
G	90	552	2027	Medium	50%	276
H	440	1,708	2027	Medium	50%	854
I	15	85	2027	Low	15%	13
J	10	57	2028	High	75%	43
K	350	2,300	2030	Medium	50%	1,150
L	300	1,971	2031	Medium	50%	986

Are AEMO's demand forecasts too low?

Announced Major Projects in the Mid-North and Northern SA

- Liberty Steel – Whyalla steelworks signed \$485 million low carbon electric arc furnace in May 2022
- SIMEC Mining Iron Ore Expansion Project
- The Northern Water Supply Project
- Rex Minerals – Hillside Project on Yorke Peninsula
- Magnetite Mines – Razorback Iron Ore Project
- Lodestone Mines – Olary Flats Iron Ore Project
- Trafigura Hydrogen Project
- BHP Olympic Dam - Smelter and Oak Dam

Are AEMO's demand forecasts too low?



Are AEMO's demand forecasts too low?

Higher forecasts

- Enable preliminary works to commence
 - Preserves the option
 - Regulatory framework still applies
 - Early costs are limited

Lower forecasts

- Limit planning
 - Patchwork quilt - we must connect the loads
 - cheaper to have a coordinated approach
- Deter or 'chill' load growth
 - If investors aren't confident the network will be there they might not invest
 - Handbrake on State development



Demand Management Innovation Allowance Mechanism (DMIAM)

Simon Appleby
Head of Corporate Affairs

Demand Management Innovation Allowance Mechanism

Purpose

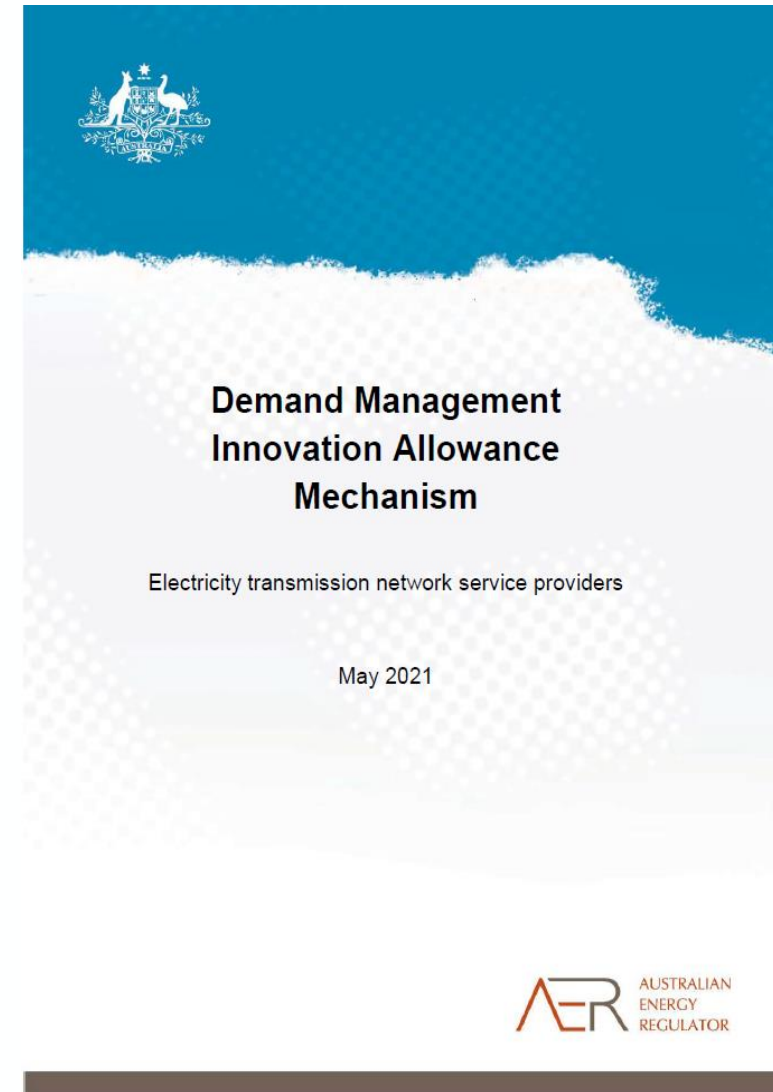
Support innovative demand management projects and programs with potential to reduce long-term network costs and prices for customers

Funding

Allowance of \$2.2m (0.1% of revenue) over 5 years plus \$200k for independent assessment

Criteria

Must be innovative, increase demand management capability, reduce long-term network costs, share learnings



Role of the CAP

ElectraNet and Consumer Advisory Panel

ElectraNet

- Identify proposed projects
- Undertake approved projects
- Report and publish results

Identify potential research projects / programs

Proposal

Conduct research project / program

Reporting

Annual compliance reporting

CAP

- Endorse proposed projects
- Review outcomes

Review & endorse specific research project / program

Endorsement

Share outcomes of research project / program

AER

- Assess compliance
- Approve expenditure

Annual Approval Process

Update

- Potential role for suitably qualified and experienced electrical engineer
 - Exploring Vikram playing this role
- Prioritisation of program will be important
 - How best to target and prioritise initiatives to deliver maximum benefit?
- Proposed next steps:
 - Workshop to further develop thinking on proposed criteria
 - Identify and prioritise initiatives
 - Develop work program for consideration

Initial thinking on application of criteria

Criteria	Considerations
To involve researching, developing or implementing demand management capability	<ul style="list-style-type: none"> ➤ Does the initiative modify the drivers of network usage?
Be innovative: <ul style="list-style-type: none"> • New or original concepts • Technology, techniques differing from those used before • Different market segments from those targeted before (geographic or demographic) 	<ul style="list-style-type: none"> ➤ Are other pilot projects or research initiatives already being undertaken in this area? ➤ Have other transmission or distribution businesses undertaken similar research?
Have potential to reduce long-term network costs	<ul style="list-style-type: none"> ➤ Is it focused on ‘pinch points’ on the transmission network driving investment? ➤ Is there a clear link to transmission network cost drivers?
Include public commitment to share learnings	<ul style="list-style-type: none"> ➤ Who else will be involved in the exercise/project ➤ How will the results be shared?

CAP Annual Report to ElectraNet Board + Other Business

Chris Hanna

External Relations Lead

CAP Annual Reporting

CAP Terms of Reference

CAP Purpose

The overarching purpose of this engagement is to provide meaningful opportunities for input to improve the value of electricity transmission services in South Australia.

The CAP operates as follows...

- *The CAP will prepare an annual report on consumer issues to ElectraNet's Board;*

CAP Annual Reporting

Questions for the CAP to Consider in an Annual Report:

Part 1: Key Issues for Consumers

A. What are the key consumer issues to inform the ElectraNet Board?

Part 2: Evaluating ElectraNet's CAP Engagement

A. What does successful engagement look like?

B. How does the CAP measure success?

A. Assessment of the engagement process

B. Assessment of the outcomes

C. What other frameworks could be useful to consider?

A. AER Framework: Better Resets Handbook

B. IAP2 Spectrum

AER Framework – Expectations on Consumer Engagement

- The nature of engagement
- The breadth and depth of engagement
- The evidence of the impact

IAP2 Spectrum of Public Participation



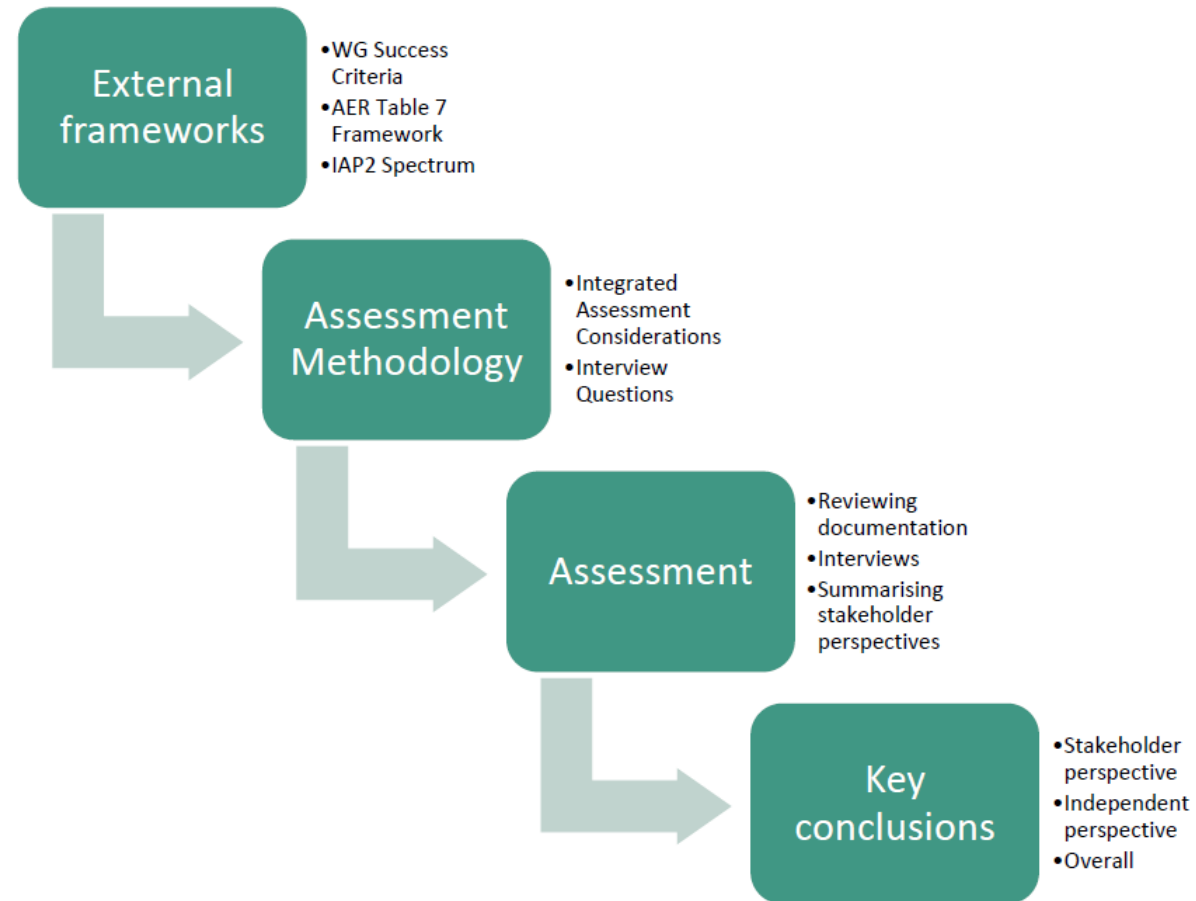
IAP2's Spectrum of Public Participation was designed to assist with the selection of the level of participation that defines the public's role in any public participation process. The Spectrum is used internationally, and it is found in public participation plans around the world.

		INCREASING IMPACT ON THE DECISION				
		INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
PUBLIC PARTICIPATION GOAL		To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.	To obtain public feedback on analysis, alternatives and/or decisions.	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	To place final decision making in the hands of the public.
	PROMISE TO THE PUBLIC	We will keep you informed.	We will keep you informed, listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision.	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	We will look to you for advice and innovation in formulating solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	We will implement what you decide.

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CAP Annual Reporting

Seed Advisory Report – [ElectraNet’s] Consumer Engagement Report Approach



Forward Meeting Schedule

Future Meetings 2023

- 20 November 2023 (pm) – CAP Meeting + Networking Drinks
- 22 November 2023 (pm) – Stakeholder Gathering

CAP only session: Forward Planning / Annual Reporting

Leanne Muffet
Independent Facilitator

April Workshop Notes

CONSUMER + / OR RELATIONSHIP ISSUES	
*Coming <u>12 Months</u>	*Coming <u>5 years</u>
<p><u>NOTE from CAP members</u>: includes a stakeholders EG: host communities</p>	
<ul style="list-style-type: none"> • Prepare for debate about future of large scale grids • ✓✓✓✓✓ Energy transition story: explaining impacts + the why + complexity + costs • ✓✓ Create (and communicate) the <u>short story</u> with costs + benefits • Social licence: <ul style="list-style-type: none"> ○ Cost of landowner access ○ Community support for energy spend increase • Environmental, Social + Governance (ESG) strategies internal and external <ul style="list-style-type: none"> ○ e.g. Reconciliation Action Plan (RAP) • ✓ Cost to industrial customers • Engagement on hydrogen development • Cost risk balance and need to invest now • Electrification and implications 	<ul style="list-style-type: none"> • Early engagement with potential host communities re: new infrastructure • ✓✓ Create (and communicate) the <u>long story</u> with costs + benefits • Affordability and equity - underpins all decisions and or engagement • Understand ongoing costs to industrial users to pay for the infrastructure • Understand sustainability of infrastructure if industrial users create own supply (i.e.: go off grid) ... what are the implications for grid load?

April Workshop Notes

INVESTMENT + / Or INFRASTRUCTURE	
*Coming <u>12 Months</u>	*Coming <u>5 years</u>
<ul style="list-style-type: none"> • ✓✓✓ Energy transition road map (at the least cost) • ✓ Cybersecurity • Upper Eyre Peninsula • Desal plant (Northern Water Project) • ✓✓ Storage- grid level: emerging technologies • PEC + rising environmental impact • ✓✓ Minimising costs to end customers • Equity for customers and community • Coordinate with distribution (SAPN) • ✓ Social licence + landowner compensation (host communities as well?) • Timely + effective transmission investment (and risk of delayed / underinvestment) • Joint CAP meeting with SAPN Consumer Advisory Board 	<ul style="list-style-type: none"> • ✓✓✓✓✓ ISP – AEMO... Regional Energy Zones (REZ) • Customer Energy Resources (CER) • Electric Vehicle coordination • Demand

From CAP ToR (June 2022)

1. Purpose

More specifically the role of the CAP is to:

- Provide considered advice, feedback and solutions to ElectraNet on significant current or future operational, industry and strategic issues that are of relevance to electricity consumers;
- Provide considered advice, feedback, and solutions to ElectraNet on electricity consumer needs, concerns, issues, and services across areas including the energy transformation, network planning and operations, regulated revenue proposals, and transition to future energy markets;
- Promote the delivery of lowest long-run cost services to consumers and their communities, having regard to the need to balance risk;
- Provide two-way engagement between ElectraNet and consumers;
- Assist in the development of a strengthened relationship between consumers and ElectraNet, through fostering open and honest dialogue.

5. Responsibilities

5.1 Role of CAP members

- CAP members play an active role in reviewing, analysing, discussing, and strengthening ElectraNet's position on a range of consumer related matters
- CAP members are expected to contribute to advice and ideas through a range of mechanisms including attendance at meetings, meeting preparation, review of documents, contributions to written advice/ reports – a key role of the CAP contribution will be input to the key aspects of ElectraNet's annual business planning process
- CAP members are expected to consult with and represent their constituencies and/ or communities of interest and provide consumer feedback on relevant issues
- CAP members are encouraged to meet informally outside of meetings to advance issues.

5.2. Role of Independent Facilitator

5.3 Role of ElectraNet

Key Success Indicators



Better Resets Handbook Towards Consumer Centric Network Proposals

December 2021



Consumer Advisory Panel Terms of Reference

24 JUNE 2022



seed

seed Advisory Consumer Engagement Report for ElectraNet 28 February 2022

2022 CAP Engagement Outcome Report FINAL 28 Feb 2022
Seed Advisory Pty Ltd (ACN 524 052 886)

www.seedadvisory.com.au

KPMG

Customer and Stakeholder Engagement Report

AusNet Services Transmission Revenue Reset Post-Lodgement Engagement Activities

Collaboration Workshop 1 | 8 April 2021

13 May 2021

The Energy Charter

2020 Disclosure Report to the IAP

Leveraging high impact points to drive meaningful change for customers

Thank You

Next meeting Monday 20 November 2023 (pm)