

# Meeting Minutes

## Consumer Advisory Panel Meeting #29

<b>Date:</b>	Thursday, 25 May 2023, 9:30am to 12:30pm
<b>Meeting Objectives:</b>	Explore ElectraNet's input to AEMO's Integrated System Plan 2024 Shape / influence ElectraNet's network development directions and priorities
<b>Attendance:</b>	Refer Attachment 1

### 1. Welcome

Leanne Muffet, Independent Facilitator, opened the meeting, undertook the Acknowledgement of Country, introduced Simon Emms, Chief Executive Officer of ElectraNet, and summarised the meeting's objectives.

Leanne noted that visitors from the Australian Energy Market Operator (AEMO) and SA Power Networks would join the meeting following CAP administrative business.

New CAP member, Mr Yarik Turianskyi from Business SA (replacing Kendall Crowe) was introduced to the CAP.

It was noted that Mark Henley could only attend the first 30-40 minutes of the meeting.

Simon Emms commented that with the new regulatory period commencing 1 July 2023, ElectraNet aims to integrate the CAP more into its ongoing planning processes and commenting on key business items, looking beyond the revenue reset.

The Meeting notes from CAP meeting 28 held on 17 April 2023 were endorsed by the CAP. Action items were reviewed and accepted by the CAP.

Simon Appleby advised the CAP of ElectraNet's final revenue determination for the 5-year regulatory period released by the AER on 30 April 2023. The AER approved the majority of ElectraNet's Revenue Proposal and noted that its engagement was genuine and steadily improved. Simon thanked the CAP for all of its efforts in engaging throughout this process and in helping to shape a successful outcome for customers.

#### Action Items (from previous meeting):

1. Provide briefing to the CAP on the Integrated System Plan – addressed at current meeting
2. Provide future briefing to the CAP on the State Hydrogen Strategy – to be scheduled
3. Invite SA Power Networks to brief the CAP on what it sees as realistic inputs to the ISP – addressed at current meeting
4. ElectraNet to share a draft of the Transmission Planning Annual Report Update – Complete
5. Include the Demand Management Innovation Allowance Mechanism on an upcoming CAP agenda – addressed at current meeting

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## 2. Presentations on the Integrated System Plan

The following guests joined the CAP to provide presentations on AEMO's Integrated System Plan (ISP):

### **Australian Energy Market Operator (AEMO)**

- Samantha Lloyd, Stakeholder Lead for System Design
- Samantha Christie, Manager Strategic Planning
- Dominic Kelly, Manager Policy and Government Affairs

### **SA Power Networks (SAPN)**

- Matthew Napolitano, Head of Network Planning
- Elisia Reed, Network Investment Planning Manager

### **AEMO Presentation**

AEMO outlined the range of work that goes in to preparing the ISP including engineering, market modelling and stakeholder engagement. Samantha Christie provided an overview of ISP and its functions:

- AEMO is tasked with delivering an ISP under its National Transmission Planner function as a whole of system plan designed to inform policy makers across the National Energy Market (NEM), as well as consumers, investors, researchers, and other stakeholders.
- The ISP identifies an optimal development path for the NEM and those transmission projects to be declared as actionable or future projects.
- If a project in the ISP becomes an actionable project, it receives a streamlined regulatory approval process.
- The key principle of the ISP is to maximise value for electricity consumers.
- As the electricity transformation continues, there is increasing focus on meeting Government and jurisdictional emission reduction targets and planning for Renewable Energy Zones (REZs) to connect the low-cost generation to the load centres.
- AEMO will release its Draft ISP on 15 December 2023 before it publishes its final ISP in June 2024.
- The potential drivers of change AEMO is currently grappling with include emission reduction, retirement of coal plants, distributed energy increases, demand forecasts, rising cost of living pressures, reliability of energy, and social licence for electricity infrastructure.
- AEMO has engaged comprehensively with ElectraNet on the draft Transmission Expansion Options Report which will shortly be released as an input to this process.

The CAP asked the following questions of AEMO, with answers as follows:

Q: Is there any consideration of decommissioning transmission lines that are no longer needed?

- Large scale retirement or decommissioning of transmission assets is not happening often in the current environment.
- The costs associated with any required decommissioning of transmission should be included in the cost benefit analysis for each transmission project or option being considered.

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- As a recent example, Simon Emms indicated that the Development Approval (DA) for the new Eyre Peninsula line stipulated that ElectraNet remove the old line and ElectraNet is currently undertaking that work as part of the scope and cost of this project.

Q: Currently construction of transmission projects is difficult owing to increased costs and extended delivery timeframes. To what extent will the ISP reflect the risks with the supply chain and what sensitivities will be run to consider the increased risks?

- This is a significant focus for AEMO given the pressures on transmission costs and timeframes.
- AEMO has recently updated its transmission cost database that is used to derive estimates through six months of consultation.
- Across general transmission projects AEMO is anticipating a 15 to 20 percent increase in cost. This will be reflected in the Transmission Expansion Options Report.
- The ISP *Consumer Panel* has also been scrutinising AEMO's transmission cost estimates.
- In the 2024 ISP, AEMO is intending to undertake sensitivity studies to ascertain the impact of potential delays to transmission projects.
- AEMO also applies a feedback loop for ISP projects. If there is a change in scope or costs, prior to proceeding, proponents must clarify with AEMO whether the ISP project still fits the optimal development path in the ISP.

Q: The arrangements in NSW/VIC to provide compensation to land holders for transmission lines have been observed with interest and these measures will increase the cost of transmission projects. From AEMO's perspective, do you see that legislation as the State's responsibility and how does that inform alternative planning options for transmission infrastructure?

- This is a very topical issue, noting QLD has also introduced such a scheme. It has become an extremely important aspect of securing social licence for transmission.
- Impacts are managed on a case-by-case basis in the ISP, recognising the differences between state requirements.
- In NSW the AER has treated the 'pass-through' of these costs as an operational expenditure component. The VIC and QLD situation is yet to be determined.
- It is also worth noting that these costs are in addition to the cost of acquiring the easements.

Q: When cost benefit analysis is undertaken, is there any distinction between customers who use energy from the network and customers who use energy from behind the meter?

- The cost benefit analysis currently undertaken for the ISP can include AEMO's professional judgement on additional considerations and consumer preferences such as this.
- AEMO is currently considering a new metric to capture this. How this metric will be derived and applied is currently being considered in conjunction with an independent consultant and the ISP Consumer Panel.

Q: Changes to the National Electricity Objective (NEO) have been developed to include an emission reduction objective. To what extent will that impact the cost-benefit analysis run by AEMO?

- AEMO currently incorporates committed emission reduction trajectories into its modelling as a constraint that must be achieved in a least cost manner.
- After the new NEO comes into effect, AEMO will need to include a specific cost of carbon in its future modelling once this has been introduced as a new category of market benefit.

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Q: South Australia is reaching its peak saturation of renewable energy and power prices are not going down. Elsewhere where countries have built a low cost, low carbon grid, there has been a reliance on pump hydro or nuclear power generation. Is there a reason why AEMO continues to ignore the nuclear option towards in moving towards a low carbon, low-cost grid?

- AEMO is not ignoring this technology but includes it in its technical options, and it has a set of cost assumptions assigned to it in AEMO's GenCost report. These cost estimates are reviewed and updated over time.
- Currently it is not permitted under legislation to build or deliver nuclear energy in the system so it cannot be included as part of a viable plan.

Q: Do the costs assumed only relate to large thermal nuclear generators or also include small modular reactors?

- AEMO is receiving information on small modular reactors and will continue to do so from expert sources including the CSIRO.

### PEC Customer Impact Modelling Results

Simon Appleby advised the CAP that ElectraNet has recently commissioned analysis from ACIL Allen into the expected customer price impacts of Project EnergyConnect. This was released on 5 May 2023 and is available on [ElectraNet's website](#). The analysis shows an increase in the expected price reduction benefits for customers.

ElectraNet reminded the CAP that it is open to it to consider commissioning its own analysis if there is interest in analysis or advice on key topics of interest as part of its work program.

The CAP indicated it is interested to ascertain the difference in customer savings for a non-solar vs solar household. It was agreed this was a matter on which further advice could potentially be sought.

**ACTION ITEM:** 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.

### SA Power Networks Presentation

SA Power Networks presented on its planning priorities and 12-24 month network outlook.

Key points included in SAPN's presentation were:

- SA has the oldest distribution network in the NEM.
- AEMO is forecasting significant growth in demand largely driven by electrification of commercial industries, EV growth and domestic electrification.
- Commercial load connections have ballooned in the last 12 months.

The CAP asked the following questions of SAPN, with answers as follows:

Q: What are the factors have led to such dramatic changes in the demand forecasts? What sort of sensitivities go into this analysis?

- Factors such as the forecast uptake of EVs and electrification are leading to the dramatic change from the 2021 and 2022 Electricity Statement of Opportunities (ESOO) forecasts.
- SAPN is not investing based solely on these forecasts, but projects are considered on a year-by-year basis and a project-by-project basis.
- AEMO forecasts have strict rules on what they can consider in their forecasts. Legislative and policy changes can also cause a significant impact on the forecasts.

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- 38 percent of households in SA now have solar PV and taken in aggregate, this is the largest generator in SA. Penetration is expected to grow to 50 percent by 2040.
- The greatest challenge is to manage the reduction of minimum demand, which is causing issues with voltage instability, system security and many others.
- With rooftop solar being the largest generator on the network, and not having the same technical compliance requirements as a grid scale generator, the limited ability of rooftop solar to ride through disturbances on the network is a risk to the stability of the power system.
- This creates challenges for AEMO in approving outages to do maintenance on the network because of rooftop solar being the largest generator.
- SAPN recognises cost of living pressures and the need to increase customer value.
- SAPN is currently trialling tariffs for flexible loads on the network and is looking to expand these more broadly to charging occurs at the best time to avoid augmentation on the network.
- There is close collaboration between ElectraNet, SAPN and AEMO through joint planning, asset management and operational interactions focused on key issues such as system security, voltage control strategy, and minimum demand.

Q: Given the revenue proposals of ElectraNet and SAPN are off-set by two years, how is it possible to effectively coordinate between the two networks?

- SAPN would support the regulatory proposals to be aligned, but that would be a challenge.
- Irrespective of this, SAPN and ElectraNet continue to engage closely and coordinate with each other on what needs to be done on an ongoing basis.

Q: Seven years on from the closure of coal in SA there has been an escalation in electricity prices. How well does SAPN feel it is achieving its mission of providing cost effective solutions?

- In real terms distribution network costs have either been flat or declining. However, it is recognised there are broader industry challenges impacting on customer prices.

Q: Given the state government's support for renewable generation and hydrogen, what sensitivity analysis has been applied to future demand?

- SAPN use the 'central scenario' outlined in the AEMO's ISP as its base case to forecast demand for network planning purposes. AEMO continues to test other scenarios including the more rapid development of a hydrogen industry, particularly beyond 2030. However, for the next five years, in preparation for the upcoming regulatory period, the central scenario is used in SAPN's network planning.

Q: Networks businesses may defer asset replacement to reduce cost impact on consumers, and this may lead to short-term savings but longer term costs through reduced reliability, particularly for rural customers. How does SAPN balance this?

- It is a balancing act, looking at the best available forecasts, but before any expenditure occurs each project is scrutinised to deliver the best solution balancing whole of life costs and reliability impacts.

Q: Retailers are relied on to deliver tariff reform. Could community batteries sidestep retailers?

CAP: SAPN has had a default time of use tariff in SA since 1 July 2021. Every retailer who has a customer with a smart meter is transferring them to this tariff without the ability to transfer. For vulnerable customers, time of use tariffs can be problematic and SACOSS is concerned with the way this is playing out.



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### 4. Transmission Annual Planning Report Update

Brad Harrison, Network Planning Manager, provided a briefing on the outcomes of ElectraNet's Transmission Annual Planning Report Update. Key points were as follows:

- Energy from renewable sources is forecast to continue to grow strongly.
- ElectraNet is seeing significant interest in new load, with almost 3,000MW of current connection enquiries.
- Demand could dramatically increase due to hydrogen developments, new large industrial loads and wide-spread adoption of EVs.
- ElectraNet welcomes feedback from the CAP, particularly on the demand outlook and Renewable Energy Zone (REZ) supply options.
- ElectraNet is seeing much larger demand forecasts than AEMO is currently forecasting.
- ElectraNet's TAPR Update identifies priority near term transmission network developments for SA to enable large industrial customers to connect to the network and prepare the network for rapid electrification.
- ElectraNet is monitoring hydrogen expansion in SA. AEMO's Hydrogen Superpower scenario projects a massive potential increase in demand, but is considered plausible.
- AEMO's demand forecasts under the 2022 ISP Step Change scenario are relatively flat until 2030 and then grow significantly to 2050. The increase in demand will drive a need for new generation.
- The 2022 ISP identified a requirement for the Mid-North Expansion (Southern) by 2034 and Mid-North Expansion (Northern) by 2042.
- The Mid-North expansion delivery timeframes are approximately 4-6 years from actionable status.
- The REZ expansion study ElectraNet commissioned from Energeia found the Mid-North REZ to be the top priority.
- The Leigh Creek REZ is considered an unlikely prospect due to significant environmental and Cultural Heritage concerns.
- Energeia found electrification may be much higher and faster than AEMO's 2022 forecasts.

The following discussion ensued:

- CAP: The Commonwealth Government's safeguard mechanism, which requires the largest carbon emitters in the economy to abate their emissions, is driving changes in the industrial sector. Some will seek to remove major fuels from their processes and convert to electricity, and the biggest investment needed will be retooling.
- CAP: Most industrial businesses are looking at electrification or considering moving their facilities offshore, where the environment is different and they don't have the same emission reduction requirements.
- CAP: Most large mineral processing projects need power and water to proceed. This needs to be considered in network development involving these projects. The expansion of the transmission network in the Mid-North would enable greater magnetite mining.

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Q: Under the open access regime, how do you distinguish between proponents who are unlikely to go ahead with a project to proponents that are serious and capable of delivering a project?

- We are ElectraNet is required to respond to any formal connection enquiry or connection application it receives. Whether a connection proceeds is up to the individual proponents. Deeper network augmentation is determined by overall load growth.
- Proponents may talk voluntarily with each other. ElectraNet has not seen this level of interest for many years from so many different proponents.

Q: Is the statement, “*establish South Australia as one of the lowest cost energy jurisdictions in the world*” based on fact or numbers? Has it been quantified?

- South Australia has strong potential advantages in its future energy competitiveness. Europe for example will see increase in demand as it move away from natural gas, but will rely more heavily on offshore wind.
- SA doesn’t need to go offshore and AEMO is indicating it is much more expensive.
- The hydrogen modelling undertaken by the SA Government is built on a foundation of solar and wind and the low levelized cost of energy for these resources (i.e. the net present cost of electricity generation from these sources over a project lifetime).

Q: Why does the Northern SA have a low economic rank but a high strategic rank in the Energeia report? What is meant by ‘strategic rank’?

- Energeia ranked strategic and economic considerations equally and from this determined an overall composite rank. The strategic rank explored the socio-economic aspects of the region concerned as well as other resources such as mining resources.

Q: Is there alignment with what ElectraNet is presenting with what SAPN is seeing as well?

- SAPN is seeing a lot of potential demand growth on its network and its views are aligned with ElectraNet’s.

Q: How much interest is there in a potential customer seeking a connection versus strategically encouraging proponents to go to certain places because there will be network to support them? Who is leading who?

- It is a combination of both things. SAPN, ElectraNet and the Government work together to see where services can be delivered most efficiently and coordinate the development of the network.
- At a transmission level we know the location of mineral resources, wind and solar resources, while other large industries will locate based on other factors.
- ElectraNet also is engaged with SA Government on its 30-year plan and infrastructure corridors for future network development.

Q: AEMO is forecasting a significant demand increase from EVs but to what extent will that demand be met by Customer Energy Resources (CER)? (i.e. rooftop solar)

- The key question is how well the CER will be coordinated. EVs for example may or may not drive a significant increase in grid demand depending on the charging and discharging profiles. AEMO is keen to test this. The more CER can be managed the less need to rely on augmentation.
- Rooftop solar with battery storage is ideal. Without this, large amounts of grid-connected storage will be required.

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- AEMO's demand forecasting for its Electricity Statement of Opportunities (ESOO) involves strict criteria on the demand projects it will include.
- For AEMO's Input, Assumptions and Scenarios Report (IASR), ElectraNet provides AEMO with information on the potential transmission options that may be required under various scenarios and the cost, scope and timeframe required to deliver these.

**ACTION ITEM:** 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.

CAP: Maybe ElectraNet has a role to play in influencing broader policy settings to achieve objectives such as reducing power prices.

CAP: We are interested in discussing what the future looks like based on the information coming out of the TAPR over the next 5-10 years, and the critical signposts that will change the direction of travel.

### 5. Demand Management Innovation Allowance Mechanism

Simon Appleby, Head of Corporate Affairs provided an update on the Demand Management Innovation Allowance Mechanism (DMIAM), a small-scale incentive mechanism that provides funding for innovative research projects in areas that can unlock more demand side capabilities and reduce costs.

Key points on the topic were:

- ElectraNet has funding of \$2.2m for these initiatives over the next five years.
- A range of potential initiatives were presented to the CAP, highlighting EV to grid integration as one potential research area.
- ElectraNet proposed a process whereby it would identify potential research projects and seek review and endorsement of each of these from the CAP before proceeding.
- In addition to the endorsement role of the CAP, the services of a suitably qualified and experienced electrical engineer will be sought in reviewing potential projects. Vikram Kenjle expressed his potential interest in playing this role but would like further details.

**ACTION ITEM:** ElectraNet to:

- Engage with Vikram Kenjle on his potential role in supporting the DMIAM program
- Include DMIAM on upcoming CAP Agenda and engage further to determine how the CAP can be involved in the process.

### 6. Next Steps

The meeting schedule for the remainder of 2023 is as follows:

- **CAP Meeting 30: Thursday 24 August 2023 (9:30am to 12:30pm)**
  - TAPR Update follow up
- **CAP Meeting 31: Thursday 9 November 2023 (9:30am to 12:30pm) - TBC**



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## Action Items

Item	Action	Responsible
1	Provide the CAP with a briefing on the State Government's Hydrogen Strategy (from previous meeting)	CH/LM
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	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	CAP
4	ElectraNet to engage with Vikram Kenjle on his potential role in supporting the DMIAM program	SA
5	Include DMIAM on upcoming CAP Agenda and engage further to determine how the CAP can be involved in the process	CH/LM

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ATTACHMENT 1

<b>ATTENDEES</b>	
<b>Name</b>	<b>Affiliation / Title</b>
<b>Members</b>	
Andrew Richards	EUAA
Georgina Morris	SACOSS
Greg McCarron	Central Irrigation Trust
Mark Henley	Consumer Representative
Mark Parnell	Environment Representative
Rebecca Knol	SACOME
Simon Maddocks	Primary Producers SA
Vikram Kenjle	University of Adelaide
Yarik Turianskyi	Business SA (online)
Leanne Muffet	Independent Facilitator
<b>ElectraNet</b>	
Simon Emms	Chief Executive Officer
Simon Appleby	Head of Corporate Affairs
Brad Harrison	Network Planning Manager
Chris Hanna	Senior Adviser Government and Stakeholder Relations
<b>Guests</b>	
Samantha Christie	AEMO (online)
Samantha Lloyd	AEMO (online)
Dominic Kelly	AEMO
Matthew Napolitano	SA Power Networks
Elisia Reed	SA Power Networks