

REPRESENTING AUSTRALIA'S
ENERGY NETWORKS ENABLING
A CLEAN ENERGY FUTURE
FOR ALL AUSTRALIANS



YEAR IN REVIEW 2022-23



CEO REVIEW



This past financial year has seen a maturing of the transition to net zero. While the task is monumental, right across the sector, networks, governments, and market bodies are all growing in their understanding of how the transformation of the energy grid will look and a clearer image is beginning to emerge.

Networks are adopting new and innovative technologies to welcome to the transition and prepare their businesses to best serve customers through the transition.

This year has been one of significant change at Energy Networks Australia. After five years, we said goodbye to several senior staff members, most notably Andrew Dillon. Andrew should be proud of the legacy he has left not just at ENA, but to the wider energy sector.

Despite the changes, the team at ENA has maintained its strong position within the sector and it has been encouraging to hear the high regard our members, governments and market bodies hold ENA in.

Energy Networks Australia's biannual reputation audit showed that overall stakeholders had a positive view of ENA and noted our strong technical and expert knowledge. Our staff are seen as a trusted source of information and an effective advocates for the industry.

While overall our reputation audit showed ENA and the wider industry are viewed 'favourably', social license and consumer engagement best practices are still top of mind for our networks and consumers. The build out of critical transmission infrastructure is essential to deliver the clean dispatchable power our grid needs to keep the lights on. Stakeholders were quick to warn a failure to ensure consumer engagement best practices are maintained will mean customers and landowners are not brought along on the renewables journey.

As we enter into the 2023-2024 year, the secretariat is looking to consolidate the work already achieved and increase our presence in the thought leadership and advocacy space. We know that our members are looking to us to have a strong voice for the energy sector as Australia and the rest of the world transition to net-zero.

This year will see an informed and progressive focus on a whole of system approach to decarbonising our networks, while at the same time ensuring customers receive a reliable, stable essential service at the least cost.

ENA has been actively involved in a broad range of reforms mainly across ESB, AEMC, AEMO and AER. Across the market bodies the secretariat has responded to 19 consultations including several consultations on the various models for transmission access reforms with an emphasis on reforms that benefit customers and limit increased costs.

The AER's determination to reverse its draft position to move to a 5-year term of equity and retain the standard 10-year approach was the result of strong advocacy from the Rate of Return Working Group. Positively, the WA ERA drew upon direct ENA submissions and expert materials prepared as part of the ENA project to move its practice from a 5-year term of equity, to a 10 year term of equity, meaning a consistent approach Australia wide.

Our reinvigorated events program has meant a return of the Regulation and Innovation seminars, along with our annual awards program and annual dinner. The Parliamentary Networking event held at Australian Parliament House in November with Energy Minister Chris Bowen was a particular highlight.

Work is already well underway for EN2024, the energy networks conference and exhibition which will take place in Adelaide in March.

For me personally , my tenure at ENA is only just beginning, but I am acutely aware this is one of the most exciting times to be in the energy sector as we move full steam ahead to a decarbonised energy industry.



Dom van den Berg
Energy Networks Australia
Chief Executive Officer



STRATEGIC GOALS

1. COMMUNITY AND CUSTOMER TRUST

The energy networks sector is trusted as it engages with customers and stakeholders to increase alignment of interests. Network businesses are seen as 'part of the solution' to achieve Australia's energy transformation objectives.

2. POLICY AND REGULATION REFLECTS ALIGNMENT OF CUSTOMERS AND NSPs

Energy policies and regulation which aligns the interests of networks and their customers, delivering flexible outcomes that customers value. Policy is evidence based and regulation provides confidence to all stakeholders including investors.

3. TRANSFORMING ELECTRICITY AND GAS NETWORKS

Innovation in network services and business models delivers solutions valued by customers.





**COMMUNITY
AND CUSTOMER TRUST**

ADVOCACY AND CORPORATE AFFAIRS

Throughout this past year, ENA's advocacy and corporate affairs team has been collaborating closely with our members to communicate impactful, precise messages to the energy sector, market bodies, and the media.

Our primary advocacy goal has been to highlight the pivotal role networks play as the facilitators for energy transition, while championing a comprehensive, systems-based approach. We've stressed the significance of timely investments in transmission infrastructure and the need for appropriate social license settings.

To amplify our advocacy work, we've identified and promoted opportunities for our members to network amongst themselves, engage with policy makers, and interface with industry experts. We successfully hosted a parliamentary event in Canberra, bringing together parliamentarians and policy makers. Moreover, we launched a new addition to our events calendar: *The Energy Network's Innovation Seminar*, a platform designed to advance our collective efforts towards a net-zero future.

KEY MESSAGES

- ENA advocates for a safe, reliable and efficient whole of system transformation that incorporates all elements of Australia's energy supply chain.
- Australia's electricity and gas grids are the essential platforms enabling and delivering Australia's transition to net zero while keeping supplies safe, secure, reliable and affordable.
- Energy regulation must support investment in the grid to enable a safe, secure, reliable transition to renewables and deliver lower prices for customers.
- More transmission infrastructure and interconnection between states is essential to support renewable power generation, keep electricity reliable and link markets to keep customer costs down.
- Networks are adapting to make the electricity grid smarter so it can support increasing amounts of rooftop solar, storage and other high-tech devices, giving customers greater choice about how to manage their energy use.
- A smarter grid will offer cheaper power prices at different times of the day to allow customers to use their solar, batteries, electric vehicles and smart appliances to save on their electricity bills.
- Renewable gas has a role in our energy future and is need to provide feedstock and high temperature heat for industry. Hydrogen can be made from solar and wind power while also providing back up for variable renewable generation. Replacing our gas supplies with renewable gas is an important piece of the energy transition puzzle.



COMMUNICATIONS AND CONSUMER ENGAGEMENT

The Corporate Communications and Engagement Working Group (CCEWG) had a productive year in serving its objective to provide strategic communications and consumer engagement input to Energy Networks Australia (ENA) and the Policy and Strategy Committee (PSC).

The group took into account the changing external environment and broader industry context to shape advocacy and communication activities, facilitating vital engagement and knowledge sharing among member corporate affairs and consumer engagement teams.

Serving its purpose as a platform for discussion on strategic communications and consumer engagement activities, the CCEWG helped to reach consensus positions on key issues. Additionally, it advised the PSC on these matters, providing an essential link to ENA's overall strategic activities. Guest speakers from regulators, thought leaders and community groups helped provide valuable insights, and shared communication tools adding to the breadth of knowledge within the group.

Reporting to the ENA PSC as required, the CCEWG was accountable to the PSC through its chair and the secretariat.

The CCEWG's key meeting themes were determined based on advice and suggestions from its members. The group remained proactive, working to develop positions on key issues ahead of time while also being reactive to emerging matters. A satisfaction survey was conducted annually among CCEWG members, soliciting suggestions for future meeting topics and guest speakers.



This year's meeting agenda themes were, Reconciliation Action Plans, Critical Infrastructure and AEMO, Federal Government Expectations on Networks, How networks can assist to build energy literacy, plus a meeting designated to agenda setting and asking members the type of topics they would like to cover in the meetings. This has enabled a more strategic direction when approaching speakers and setting themes.

The composition of the CCEWG included staff from full ENA members, typically from Corporate Affairs, Media, Government Relations, and Corporate Social Responsibility areas. Members could have more than one participant in meetings, enabling a broad representation of perspectives and expertise. The group's commitment to sharing knowledge and influencing key stakeholders, such as the media, consumer advocates, and the government, was evident throughout the year.

MEDIA ENGAGEMENT

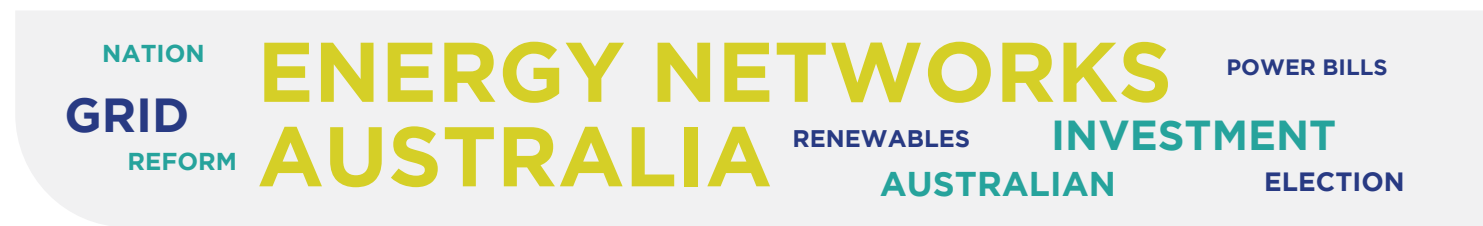
Energy Networks Australia continued to engage with both industry media and mainstream media this year.

The focus of most daily newspapers continues to be the role of gas in the transition to net zero, critical transmission infrastructure build outs and the integration of electric vehicles onto the grid.

From 1 July 2022 to 30 June 2023, ENA recorded 572 media mentions. Leading print resources were the Australian Financial Review and the Australian newspapers. The Corporate Affairs team continues to foster strong relationships with key energy journalists. In July 2022, ENA had an opinion piece published on the importance of planning for electric vehicles.



The most frequently mentioned keywords found within the Mention Stream. Font size indicates frequency of keyword by volume



ENGAGEMENT

The Corporate Affairs Team continues to provide external facing publications designed to inform and advocate on behalf of ENA's members.

The morning Daily News Brief and weekly Energy Insider articles continue to be some of the most highly regarded collateral produced by the business. Both newsletters are read widely by the sector and offer a boutique service highly valued by ENA's membership.



LinkedIn impressions

314,280



Twitter impressions

78,300



Website visits

156,238



Media mentions

572



EnergyInsider



23 FEB 2023 | 2023 ENERGY INSIDER

Unlocking the value of community batteries



23 FEB 2023 | 2023 ENERGY INSIDER

State of Transmission

2022-2023 EVENTS, AWARDS & ENGAGEMENT

INDUSTRY AWARDS PROGRAM

The Energy Networks Industry Awards program is the highlight of ENA's events calendar. It is meticulously structured to showcase the exemplary work undertaken by our members in the fields of innovation and consumer engagement.

Reflecting ENA's Energy Vision, which outlines how energy networks will collaborate with customers using innovation to pave the way towards Australia's net-zero future, the awards were presented at the ENA Annual Dinner.



INDUSTRY INNOVATION AWARD

Congratulations to the winner of the 2022 award: **Endeavor Energy** for their submission '*Using a Network Digital Twin for Digital Emergency Response and Resilience*'

The Energy Networks Australia Innovation Award is designed to celebrate pioneering contributions to the Australian energy network industry. This award recognises the design, development, and application of breakthrough initiatives, technologies, services, or solutions across various areas such as asset management, distributed energy resources, operations, environmental sustainability, business models, and customer solutions and engagement.

In 2022, this award highlighted the innovative ways businesses have transformed the energy network sector in Australia.



CONSUMER ENGAGEMENT AWARD

Congratulations to the winner of the 2022 award: **AusNet** for *Three businesses, One Engagement Program for Victorians.*

The Consumer Engagement Award represented an opportunity to acknowledge outstanding leadership in consumer engagement efforts by Australian energy network businesses. These businesses have proven their dedication to integrating customer values into all aspects of their operations, ultimately delivering services that greatly benefit consumers in an era of rapid energy transition.

INDUSTRY CONTRIBUTION AWARD

Congratulations to the winner of the 2022 Award: **Laurie Curro**, Horizon Power, for *recognition of his contribution and commitment to the energy industry, in particular to power transmission and distribution in Western Australia over the past 30 years.*

The Industry Contribution award is an opportunity to recognise exceptional individual contributions for activities or other initiatives undertaken on behalf of the networks sector by a member of an Energy Networks Australia (ENA) Committee or Working Group.

REPUTATION AUDIT

In March 2023, ENA undertook its biennial Stakeholder Reputation Research audit.

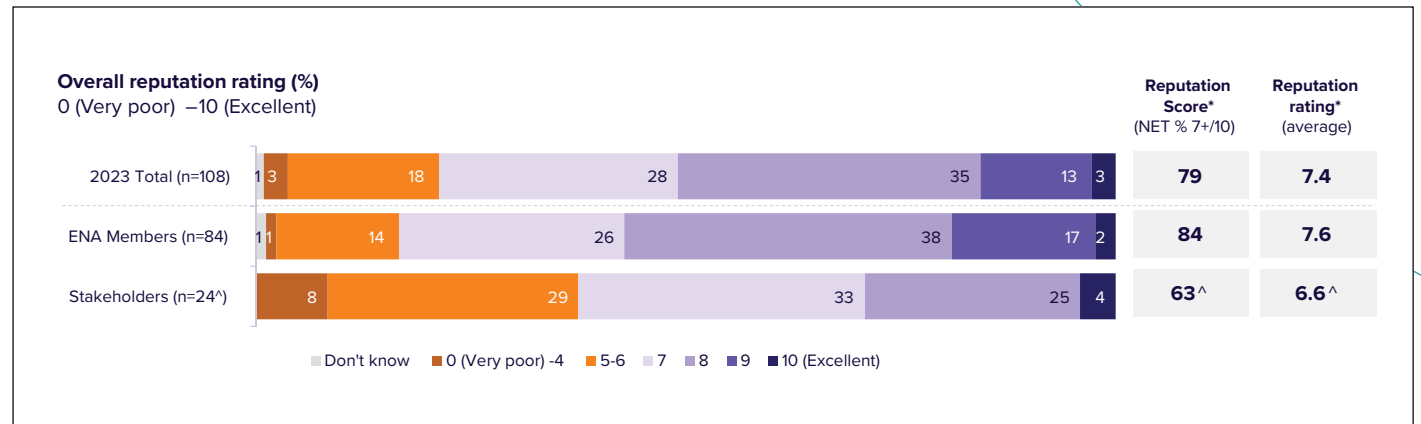
This year it was prepared by SEC Newgate. SEC Newgate undertook nine in-depth interview with market bodies, consumer groups and government.

It also conducted an online survey which has 99 responses. The online survey had 99 responses, of that 99, 84 were members. Participants in both the in-depth interviews and the online surveys were asked about ENA specifically and the energy sector as a whole.

Overall 87 per cent of participants felt their view had remained the same or became more positive over the last 12 months. Stakeholders encouraged ENA to be an active voice in the media and to continue to advocate for what is needed for the networks industry to meet the growing demands of the energy transition and the community.

“THE PERSONNEL OF ENA ARE VERY HIGH CALIBRE. THEIR PROFESSIONALISM, KNOWLEDGE AND INSIGHT IS VERY VALUABLE.”

A STRONG OVERALL REPUTATION SCORE OF 79



MARKET SOUNDING REPORT ON TRANSMISSION

KPMG was appointed by ENA and the Clean Energy Council to engage with senior representatives across the energy sector to hear their views on the barriers to transmission investment and the potential path forward.

AEMO's 2022 draft Integrated System Plan identifies an additional 10,000km of transmission lines required to support 120 GW of large-scale storage and renewable energy on the national interconnected energy system.

Respondents recognised the interplay of regulatory, market, customer and funding factors which combine to create investment challenges in the required timeframes. Unresolved, these challenges will impede Australia's energy transition.

CLICK



Summary of key issues raised by stakeholders with transmission

Stakeholders identified a number of issues in the transmission sector, with the following 5 issues dominating the views of those interviewed.



1 Complex and lengthy development and assessment

Overview: There was overwhelming consensus that the development and assessment of transmission lines as well as the connection process to transmission were both complex and lengthy.

Key themes: Social licence, planning approvals, land rights, community engagement.



2 RIT-T process shortfalls

Overview: Almost all stakeholders believed that the RIT-T process did not include all the relevant economic benefits. Furthermore, cost-recovery from consumers doesn't reflect the distribution of benefits.

Key themes: Additional benefits, charging models evolution, cost of carbon, construction premium



3 Lack of public funding

Overview: Almost all stakeholders recognised the need for government concessional funding to support development and construction of new transmission corridors.

Key themes: Affordability, financing, development and construction risk, private investment at COD.



4 Tight work force & supply chain

Overview: The tight labour market presents issues in supply chain. A key concern observed by various stakeholders included the availability of organisations with capabilities to deploy at scale and co-ordination across all NEM projects.

Key themes: Labour, inflation, supply chain, workforce, organisational capabilities.



5 Uncertainty of access

Overview: A number of stakeholders identified the complexity of operational access on transmission lines leading to congestion and uncertainty for generation developers.

Key Theme: Grid connection, congestion, marginal losses, transmission constraints.

EVENTS

PARLIAMENTARY RECEPTION – NOVEMBER 2022 PARLIAMENT HOUSE, CANBERRA

Event Summary

Energy Networks Australia hosted the inaugural Parliamentary Reception at the Parliament House Queen's Terrace, on 23 November 2022. The event received a strong attendance of 160 participants from across the energy sector.

Speakers included The Hon Chris Bowen MP, Federal Energy Minister, and our former CEO, Andrew Dillon.

The event attracted a diverse audience, comprising politicians, public service members, personnel from transmission and distribution networks, suppliers, regulators, and various supply chain partners.

The reception provided an opportunity for candid discussions on prominent industry issues and underscored our commitment to facilitate communication between different stakeholders within the energy sector. This event has set the tone for future engagement and has been instrumental in enhancing the discourse around energy policy and practice.



INNOVATION SEMINAR - MAY 2023

CENTREPIECE, MELBOURNE PARK

Event Summary

On 3 May 2023, Energy Networks Australia hosted our inaugural 'Innovation Seminar – Enabling Net-Zero' at Centrepiece, Melbourne Park. The seminar attracted 202 participants and was incredibly well-received by delegates, speakers, sponsors, and exhibitors.

The purpose of the seminar was to foster collaboration and innovative thinking among industry experts, members, and partners. The central focus was on how to jointly work towards decarbonising our energy system while maintaining support for communities, ensuring the security and reliability of our energy supply, and delivering on our net zero ambitions. This event serves as an important platform for sharing insights and advancing solutions in our industry.

Event Highlights

The Innovation Seminar was a packed, buzzing room of energy stakeholders in Melbourne. Delegates started their day hearing about nuclear fusion, electric aircraft, the rise of artificial intelligence and green steel, and then delved into the future priorities of the nation's top energy regulators and leaders. The Innovation Seminar was an enormous success on all fronts, attracting industry heavyweights from across Australia to connect with peers and discuss how all components of the energy sector can work together to enable net-zero.

Dr Bruce McCabe, keynote speaker was a particular highlight. He had the room full of energy experts captivated from his first word, announcing that the crowd was part of the biggest wealth creation opportunity in generations, with "capitalism and environmentalism colliding." While Ben Wilson, National Grid UK discussed the similar challenges in the UK that Australia are facing, and the solutions required to reach both domestic and international goals.

Sponsors

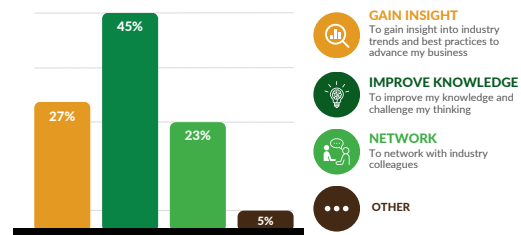
- **Event Sponsor**
KPMG
- **Networking Reception**
AusNet Services

Keynote Speakers

- **Dr Bruce McCabe** Global Futurist and Innovation Expert
- **Ben Wilson** Chief Strategy and External Affairs Officer, National Grid UK

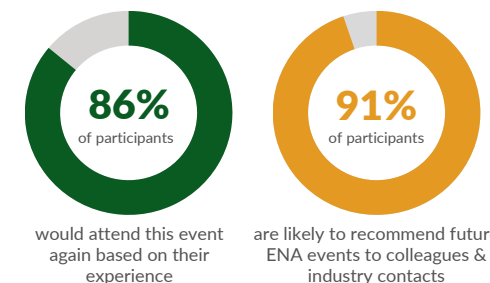


Objective for attending



Post Event Insights

Would attend again or recommend



Energy Networks

ADELAIDE 19-21 MARCH

2024

Energy Networks Australia's biannual event is a chance for members, key stakeholders and industry partners to discuss the transformation of our 20th century grid so it can deliver energy and provide services and value the way consumers of the 21st century demand.



Hosted by Energy Networks Australia, the event is designed to connect people from across the industry, providing opportunities to strengthen existing relationships and create new ones.

This is the only conference and exhibition on the energy network event calendar run by the industry, for the industry.

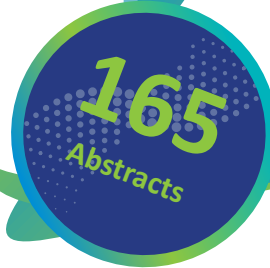
This event provides unparalleled opportunities to create strong and enduring business relationships, do deals, collaborate, share ideas, be inspired and learn from one another.

Update on EN2024

Energy Networks Conference & Exhibition 2024, to be held in Adelaide 19-21 March 2024, is shaping up as the best way to learn about current, exciting developments and success stories in the energy network sector today.

In preparing next year's program, we have invited speakers to offer compelling industry updates through case studies and discussions on significant developments in the Australian energy sector, including regulation, transmission, social license, orchestration, and many other pertinent themes.





Program Development Committee

We have 27 member representatives on the PDC who provide their guidance, intellectual capital and expertise while reviewing the 165 abstracts that we received this year.

The themes for EN2024 highlight some of the key issues the network sector faces as Australia transitions to a cleaner energy future.

- **Powering the Future:** Integrating Gas and Electricity for Australia's Energy Transformation
- **Communities and Customers Enabling Change**
- **Network Resilience & Australia's Energy Future**

Student Poster Competition

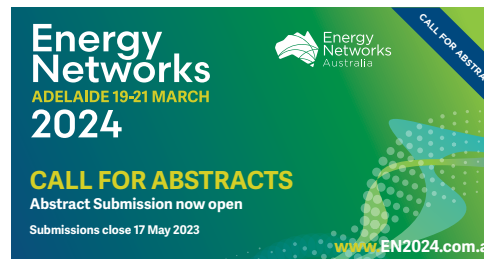
At EN2022, the inaugural student poster competition was held, where postgraduate university research students were invited to enter a competition aimed at encouraging and promoting research and innovation within the Australian energy sector. Due to its success, the competition will once again be held at EN2024.

Sponsorship

The uptake of the EN2024 Sponsorship packages is well ahead of the sales forecast and prior events for the period. The sales team are focusing on selling several of the key packages still available along with developing exciting new packages.

Marketing and Communications

ENA has long-established relationships with the trade press, including Energy Source & Distribution, Energy Magazine, and Transmission & Distribution. Advertisements and articles published with these publications are supported with a social media campaign and EDMs to ENA's database.



2023 ENA EVENTS CALENDAR



Scan QR code to see the latest ENA Events





**POLICY AND REGULATION
REFLECTS ALIGNMENT OF
CUSTOMERS AND NSPS**

POLICY AND REGULATION

RATE OF RETURN AND FINANCEABILITY

A major focus of ENA regulatory work over the past year has been the finalisation of the AER's and WA Economic Regulation Authority's Rate of Return Instruments. Through this two-and-a-half-year review process, ENA worked closely with the AER and the representatives of the specially appointed Consumer Reference Group on a full range of approach and methodology questions that sit at the heart of determining the regulatory rate of return on existing energy network investments.

Collectively, the Rate of Return Instruments play a role in determining the regulatory returns on over \$100 billion of network infrastructure, and set critical incentives for new investments. ENA successfully encouraged the development of longer-term scenario-based-thinking approaches by the AER, and also sought the fulfilment by the Instrument of clearly financeable benchmark settings to promote efficient investment to underpin customer outcomes.

ENA also worked with stakeholders in pursuit of a final Rate of Return Instrument that promoted a stable and predictable approach on core issues such as the assumed term of equity. Such approaches help support the long-term interests of customers in efficient levels of network investment by providing an appropriate and commercially sustainable return on investments made, while lowering regulatory risk. The AER's final instrument retained existing approaches across a range of settings, but also set out potential areas for future development ahead of the next review.

ENA also contributed to the parallel Rate of Return Instrument review process conducted by the WA Economic Regulation Authority. In the review's final determination, the ERA moved - consistent with the analysis and evidence advanced by the network sector through both reviews - to a standard 10-year assumed term of equity estimation approach.

INCENTIVE REGULATION

Another key regulatory policy process across 2022-23 has been the Australian Energy Regulator's review of incentive schemes. Following on from earlier work identifying the consumer benefits of well-functioning incentive regulation, including lower network prices and enhanced service to customers. ENA provided major contributions to the review as the AER, Consumer Challenge Panel and other stakeholders considered a range of potential reform options.

The analysis and business insights able to be highlighted through the review contributed to a strong reaffirmation of the underlying strength of incentive regulation in delivery of consumer benefits of the existing regime. ENA was able to ensure that the limited changes introduced to the Capital Expenditure Sharing Scheme were practical and proportionate to the risks and issues identified in the review.





TOWARDS A MORE EMISSIONS FOCUSED FRAMEWORK

Australian Government agreed in late 2022 to amend the objectives of the National Energy Laws to better recognise emissions reduction targets under the framework. The industry-supported move represents one of the most significant framework changes over the past decade of national energy market developments, and will touch on a myriad of individual regulatory, consumer and network operation and investment issues.

Through the process for finalising the amendments, ENA provided guidance on ways to ensure the most rapid, clear and effective implementation of the proposed changes to the overarching framework. This included working collaboratively with governments and market bodies to identify priority consequential rule changes that will give early effect to the framework changes, ensuring networks and customers could have clarity about the scope of proposed investment and operational decisions, and ways networks could help support the emission reduction goals that consumers support. This work will also assist in the clear transition to these new arrangements in a set of network revenue determinations underway and due to commence in the year ahead.

ENERGY SECURITY BOARD (ESB) COLLABORATION

In early 2023, the decision was made by the Energy and Climate Change Ministerial Council (ECMC) to transition the Energy Security Board into the Energy Advisory Panel (EAP).

ENA was involved in the Consumer Energy Resource (CER) and data strategy workstreams to positively influence the direction of their policy development.



We represent members in multiple forums at various levels

CER Advisory Group

Senior executive level advising on the strategic direction of the work

CER Stakeholder working group

The working group level that acted as an industry reference group on CER projects


ESB Customer Insights Collaboration

The working group that provided advice to the ESB on the customer perspective

ESB Data Strategy work

The new EAP will be transferring responsibility of current ESB projects to various market bodies to progress and complete. ENA will continue to monitor and engage on topics important to members wherever they end up.





**TRANSFORMING
ELECTRICITY AND
GAS NETWORKS**

NETWORK TRANSFORMATION

TRANSMISSION

ENA has been actively involved in a broad range of reforms mainly across ESB, AEMC, AEMO and AER on behalf of transmission members. Across the market bodies we have responded to 19 consultations.

TRANSITIONING THE NEM TO NET ZERO

Aspects of the ESBs post 2025 NEM reforms have been progressing during 22/23.

ENA has responded to ESB consultations on the contentious capacity mechanism and several consultations on the various models for transmission access reforms with an emphasis on reforms that benefit consumers and limit increased costs.

The ESB’s Essential System Services workstream morphed into a range of rule changes over the last few years with differing services running at different speeds. ENA has been actively involved in the system strength implementation in both the planning timeframes and the operational timeframes over the last year order to implement sensible arrangements for the scheduling, dispatch and settlement of procured system strength that result in cost efficient outcomes for consumers across energy and system strength.

ENA recognise that the AEMC recently announced a change of direction in the operational security mechanism, ENA will continue to be involved with transmission members to encourage the provision of cost effective system services that result in good outcomes for consumers and other stakeholders in both planning and operational timeframes.



Australia is a leader in penetration of renewables on the grid, ENA are pleased with the pragmatic decision to include inertia better into the planning framework with system strength, however, the ability to schedule security services and energy services to optimize outcomes for consumers remains a concern.



RENEWABLE GAS

In 2022, the renewable gas team took significant strides by expanding their workforce, appointing a new Renewable Gas Policy Manager and Renewable Gas Project Officer.

This decision was driven by the increasing importance of advancing renewable gas opportunities in Australia to align with the country's emission objectives for 2050. Notably, these newly created positions are fully funded by gas network members.

A major priority for the committee is to develop and promote options for renewable gas policies.

Three projects are underway to better understand the impacts and benefits of renewable gas policies and how they could be implemented.

Upon completion (in later 2023), the output from the projects will be used to engage with policy makers on the role, opportunities and design of a renewable gas scheme that can both develop the renewable gas industry while also reducing emissions. ENA has also continued to engage in the development of renewable gas certification schemes.



The Gas Committee visited Jemena's Malabar Biomethane Injection Project and Jemena's Western Sydney Green Hydrogen Hub.



A gas innovation workshop was facilitated by ENA in May 2023. Thirty six gas engineers from member businesses shared information on diverse topics including repurposing gas infrastructure, gas mains replacement and modelling, GIS, and data analytics. The satisfaction rate of the workshop was very high at 96 per cent and it was highly recommended for ENA to make this an annual event.



The renewable gas team continues to be involved in all aspects of Future Fuels CRC across the three research programs. At the end of June 2023, 110 research projects had been started and 50 of those completed. Within these projects, there are 44 PhD students, 10 Masters students and 2 Honours students enrolled. The Future Fuels CRC funding has mostly been committed to research projects and will continue until June 2025. One of the key projects is the long-term assessment of materials using in gas distribution piping with hydrogen. The FFCRC research has collected assets from all of Australia's gas distribution network businesses and is carrying out ongoing testing.

TRANSMISSION PLANNING AND INVESTMENT

The actionable Integrated System Plan (ISP) rules framework commenced on 1 July 2020, with the final 2022 ISP released by AEMO on 29 June 2022. AEMO noted several risks to delivering the ISP – gaining and retaining social licence, supply chain issues, resourcing and financeability. AEMO are well underway with final inputs and scenarios for the 2024 ISP.

The AEMC continued its Transmission Planning and Investment Review to address efficient and timely delivery of transmission infrastructure with three stages of the review concluding in the last year. ENA has been active in this review on matters such as social licence, concessional financing and financeability, ex post review, early works, transmission planning and delivery models and improvements in the regulatory investment test process.

The Transmission Planning and Investment Review whilst concluded will create some 7-8 rule changes with the AEMC and a similar amount of AER Guideline amendments or Guidance Note development over the next 18 months. The AEMC has already commenced the rule changes for concessional financing and financeability. A third rule change request on social licence has been submitted but not yet commenced rule change processes.

Whilst ENA recognise that the AEMC is consulting on the financeability rule changes, ENA has submitted a complementary rule change which is able to provide investors with more certainty on financeability earlier in project planning. Before these arrangements are even implemented the AEMC is due to commence the ISP required rules review which needs to complete by mid 2025.

Despite these changes in the national arrangements, NSW has continued development of underlying guidelines and network infrastructure strategies to develop the needed transition to renewables.

Victoria after consulting on its transmission planning and investment framework has announced its policy positions in June 2023 with priority REZ development identified in early 2024 and a draft Victorian Transmission Plan available for consultation by late 2024.

Queensland also announced their Blueprint plan and are moving to legislate the framework in 2023 with consultation on their legislation closing at the end of June.

NSW, Vic and Queensland have also announced additional payments to landowners who host new transmission infrastructure. Victoria is also continuing to develop a land access code of practice on respectful land access negotiations.

Transmission is essential to facilitate the transition to net zero, however increased certainty for planning and financeability is needed to ensure timely delivery across the evolving multiple frameworks.



DISTRIBUTED ENERGY NETWORKS AND FUTURE NETWORKS

The Energy Transition requires networks be prepared for an increasingly uncertain, dynamic and renewable future whilst continuing to serve their customers safe, reliable and efficient power. It is becoming clear that networks are viewed by policy-makers to be a primary lever that realises the vision of operating a renewable power system and that ENA is the conduit through which they tap into this knowledge.

ENA Networks team has been proactive in establishing key relationships across the State and Federal policy landscape that will be able to influence the direction of key topics such as:

- Technical operation of a high renewables power system (Transmission & Distribution)
- The future regulatory and technical frameworks of DER, including Solar PV, EVs and Batteries

- DER compliance and enforcement
- Potential distribution system operator (DSO) models, trials and strategic insights.

- AEMC reviews and rule changes

Numerous industry reference groups such as the AEMC Reliability Panel, AEMO National Electricity Market Operations Committee (NEMOC) etc,

ENA is often invited to participate as a steering member or reference group for new trials and research in the energy space, as we have established a brand as a trusted partner that represents Networks and their perspectives.



STANDARDS, GUIDELINES AND RESEARCH

ENA is one of the most active organisations that contribute to the development of Australian Standards. We currently coordinate more than 80 representatives from our members that serve on more than 100 technical committees. Through our member representatives we have established a strong reputation as a credible, reliable and active player in the technical standards environment.

This reputation also reinforces our credibility in discussions on policy implementation with the various policymakers.

Specific areas where this has benefited members includes:

- **Solar PV integration** – AS4777.2 Inverter standards
- **Solar inverters installation requirements** - AS/NZS 4777.1
- **Common Smart Inverter Profile (CSIP-AUS)** – Interoperability standards for smart devices
- **Revising AS5804 safety standards**
- **Live working standards** - AS 60984

ENA also maintains high quality industry Guidelines that are endorsed by the Asset Management Committee (AMC) on a wide variety of technical topics such as Standalone Power Systems (SAPS), DER connections, physical security etc. These Guidelines not only protect members interests, but also generate revenue to support ENAs internal functions.

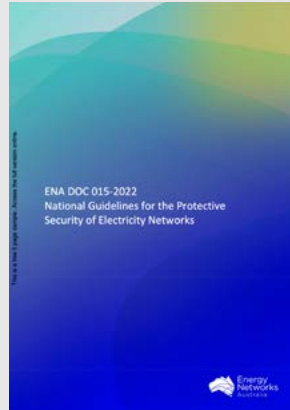
A long-running initiative of the ENA Asset Management Committee and the Australian Power Institute (API), the Australian Strategic Technical Project (ASTP) completed one project and began two new projects over the past year:

- **EV Integration Project:** Researching the impacts of electric vehicles (EVs) on distribution networks and possible solutions to mitigate these impacts. The final project report was delivered in October 2022.
- **Non-Destructive Testing (NDT) for Condition Assessment of Wooden Poles:** A technical assessment was undertaken of various NDT devices to identify the most appropriate NDT devices for use on a range of wood poles through cost and benefits analysis. The project started in February 2022 with expected completion in Q1 2024.
- **Probabilistic Weather Forecasting:** Members will be participating in a workshop being run by Risk Frontiers to better understand what tools and knowledge might be applicable for asset managers in the face of a changing climate.



STANDARDS AND GUIDELINES

Standards and Guidelines are a key part of ENA’s value to members. Ensuring that Australia Standards and our public catalogue of industry guidelines are current and correct enable ENA and our members to influence suppliers and vendors to provide the right products that address members’ needs.



CLICK

NATIONAL GUIDELINES FOR PROTECTIVE SECURITY OF ELECTRICITY NETWORKS

(ENA DOC 015-2022)

The intent of this document is to provide NSPs with a best practice starting point for the development and/or augmentation of their physical security program, in response to the evolving regulatory and security risk environment.



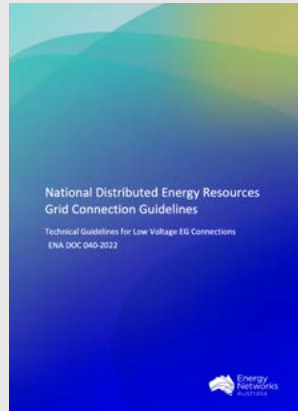
CLICK

NATIONAL DISTRIBUTED ENERGY RESOURCES GRID CONNECTION GUIDELINES TECHNICAL GUIDELINES FOR SMALL IES EG CONNECTIONS

(ENA DOC 039-2022)

Specifies how DNSPs shall develop and apply technical requirements for the connection of a small EG unit with a total system capacity less than or equal to 10 kVA for single-phase IES, and less than or equal to a total system capacity of 30 kVA for three-phase IES to an LV distribution network.



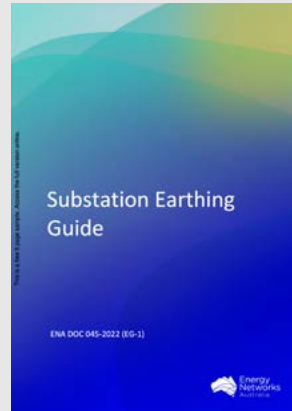


CLICK

NATIONAL DISTRIBUTED ENERGY RESOURCES GRID CONNECTION GUIDELINES TECHNICAL GUIDELINES FOR LOW VOLTAGE EG CONNECTIONS

(ENA DOC 040-2022)

Specifies how DNSPs shall develop and apply technical requirements for the connection of an EG unit (which is not a small IES EG unit) to a LV distribution network.

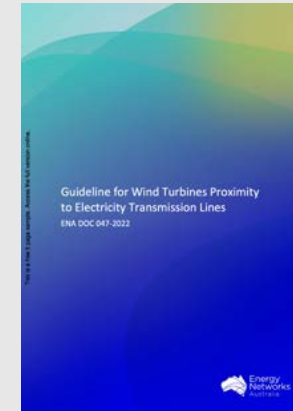


CLICK

SUBSTATION EARTHING GUIDE

(ENA DOC 045-2022)

The purpose of this guide is to provide guidelines for the design, installation, testing and maintenance of earthing systems associated with electrical substations. Earthing systems that are covered in this guide include those associated with generating plant, industrial installations, transmission and distribution stations.



CLICK

GUIDELINE FOR WIND TURBINES PROXIMITY TO ELECTRICITY TRANSMISSION LINES

(ENA DOC 047-2022)

The document provides a basic overview of the risks associated with WTGs in close proximity to electricity lines. It provides information on the failure modes and approximate failure rates of WTGs based on historical performance. In particular, the two failure modes which could have consequences for nearby electricity lines: wind turbine structure collapse and blade impact (following a blade detachment event), have been studied in greater detail.

PUBLICATIONS FOR 2022-2023

As well as publications highlighted in other parts of this document, Energy Networks Australia commissioned the following reports and publications during 2022-23.



[CLICK](#)

INDUSTRY INNOVATION REPORT 2022

This report details case studies that were submitted to Energy Networks Australia for the 2022 Industry Innovation Award.



[CLICK](#)

CONSUMER ENGAGEMENT REPORT 2022

This report details case studies that were submitted to Energy Networks Australia for the 2022 Consumer Engagement Award.

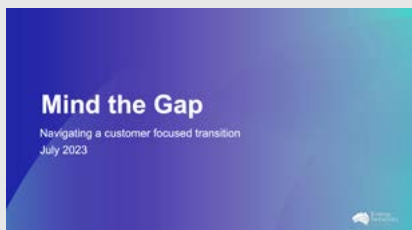


[CLICK](#)

COMPETITION ISSUES FOR CONTESTABLE TRANSMISSION CONNECTION PROJECTS

A report on competition issues for contestable transmission connection services.

Specifically whether there is a need for additional ring-fencing measures to protect competitive outcomes in the market for contestable transmission connection services.



CLICK

MIND THE GAP

Navigating a customer focused transition



CLICK

2030 EMISSION REDUCTION OPPORTUNITIES FOR GAS NETWORKS

A high level analysis of potential emission reductions from gas infrastructure was completed. This identified potential measures across the supply chain for domestic gas usage to reduce emissions and identified associated supportive policies required. The research found that moderate supportive policies could achieve a 16 to 30 per cent reduction in emissions from domestic natural gas use by 2030 while stronger settings may achieve up to a 50 per cent reduction.



No link

ELECTRIFICATION JOURNEY

A study was conducted to evaluate the drivers, barriers and benefits and downsides of electrification at household level with customers who have already electrified, are currently on an electrification journey or embarked on their electrification journey but were unsuccessful. The study looked at the type of customers who electrified, why they electrified and what costs and cost savings they encountered in their electrification journey as well as the timelines needed to electrify. Key findings from the research include: the journey to electrify is long and non-linear; full electrification is rarely a conscious decision from the beginning; the process is harder and more involved than anticipated and there are often unexpected costs.



internal Doc

FSA ON CONSUMER PIPING PRESSURE PROTECTION REPORT

Concern was raised regarding the use of service regulators incorporating Over Pressure Shut Off (OPSO) features set to shut-off supply in residential service applications. When shut-off pressure is above the rated pressure, potential control pressure failure leads to loss of containment or breakdown in the open position. Energy Networks Australia (ENA) engaged John Blain of Ninox Solutions Pty Ltd to facilitate formal safety assessment (FSA) of the concern in accordance with a Scope of Work drafted and issued by Jemena.



CLICK

MARKET SOUNDING REPORT ON TRANSMISSION

Market sounding report conducted by KPMG on behalf of ENA and CEFC

GOVERNANCE

CEO FORUM

The CEO Forum, comprises the CEOs and ENA Members, provides strategic guidance for the activities of the ENA Board, secretariat and member committees. There were two CEO Forums that were held in Melbourne, one in September 2022 and the other in June 2023.

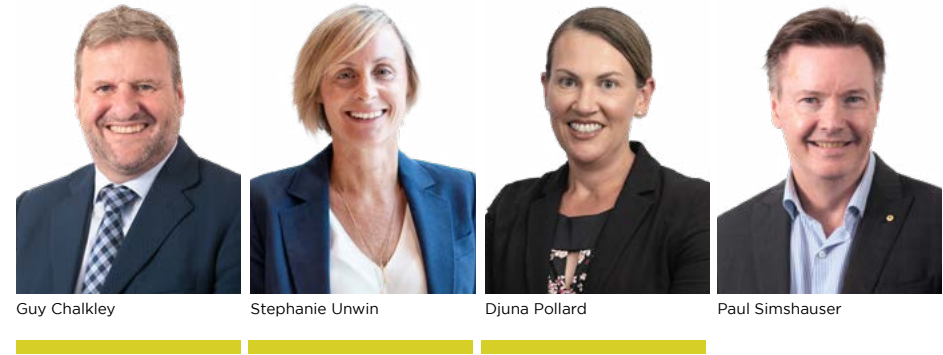
BOARD

The Energy Networks Australia Board comprises:

- » Frank Tudor (Chair)
- » John Cleland (Deputy Chair)
- » Tim Rourke
- » Craig de Laine
- » Stephanie Unwin
- » Djuna Pollard
- » Paul Simshauser
- » Seán McGoldrick
- » Simon Emms
- » Sam Barbaro

Simon Emms (CEO of ElectraNet) and Sam Barbaro (CEO of Western Power) joined the Board in November 2022.

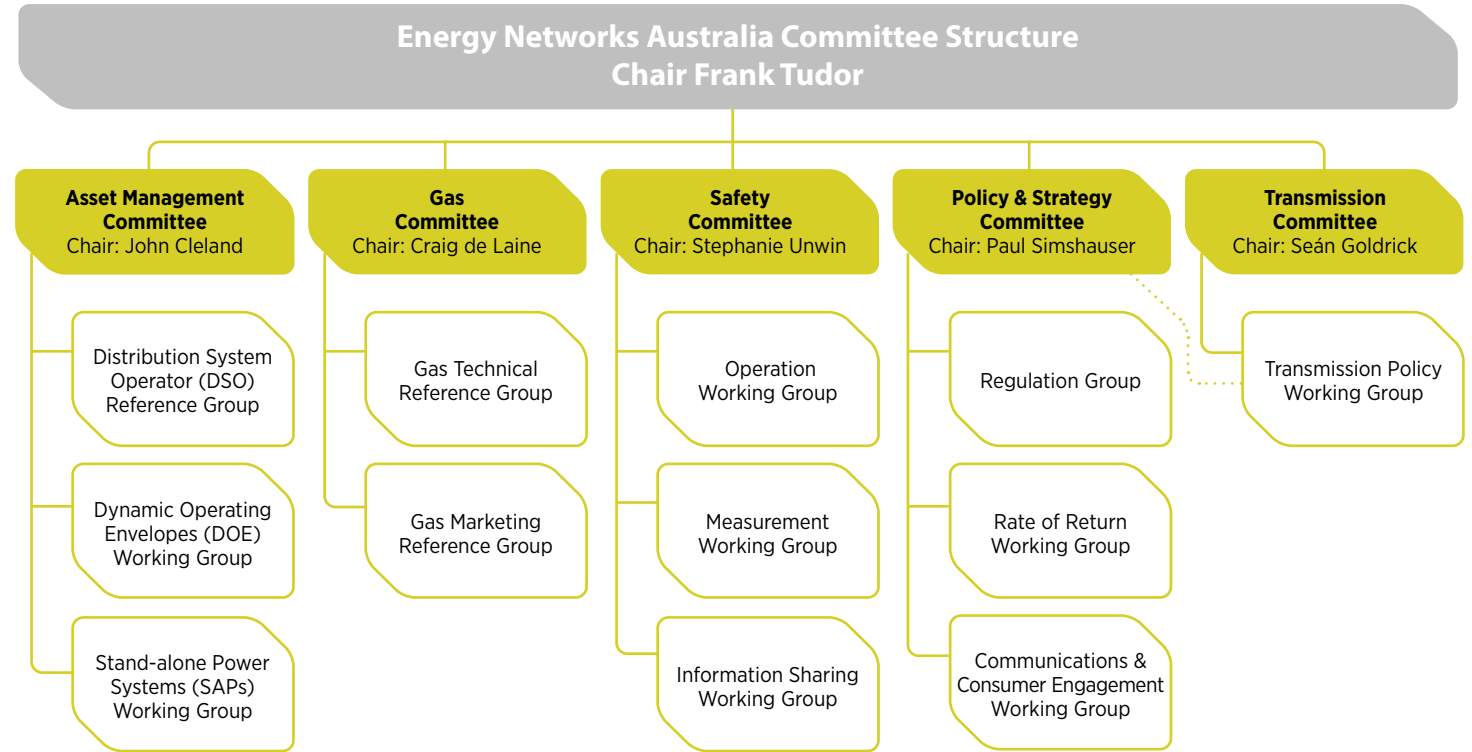
Richard Gross resigned from the Board in November 2022, and Rod Duke resigned from the Board in April 2023.



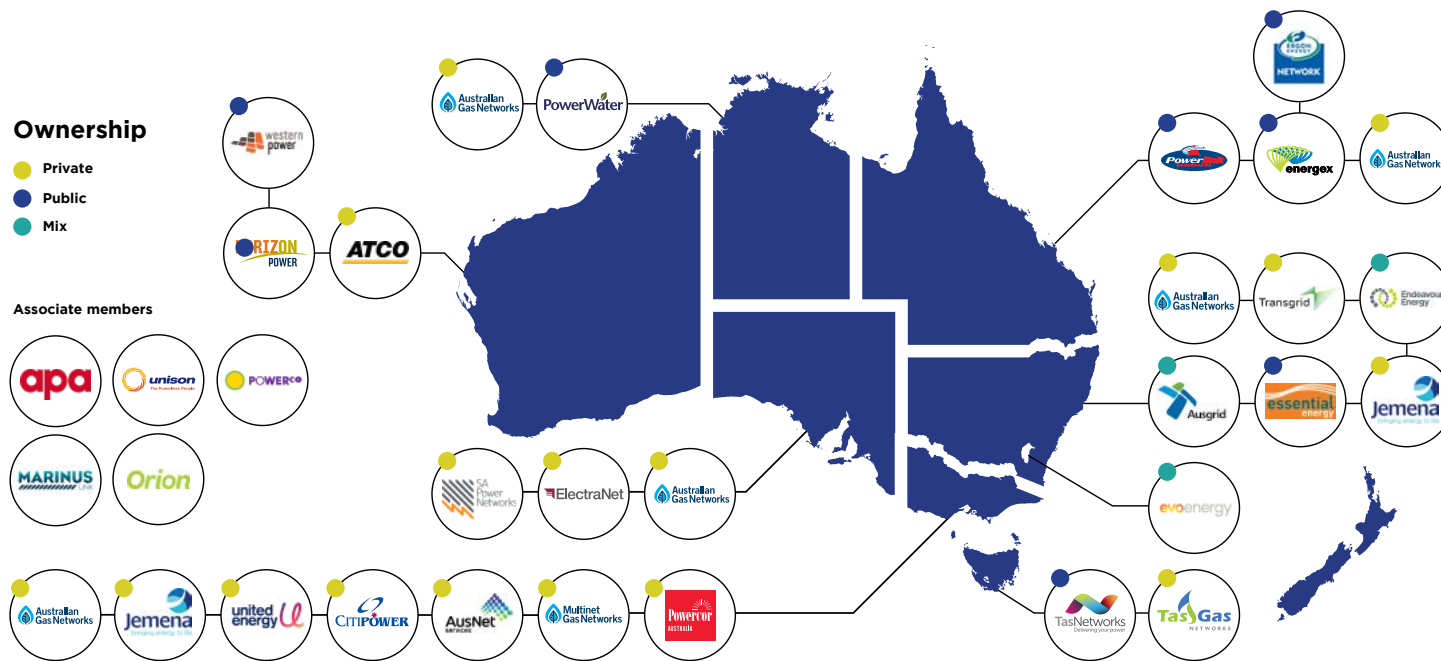
COMMITTEE STRUCTURE

The Board is supported by several corporate governance and policy committees including:

- » The Remuneration Committee chaired by Frank Tudor.
- » The Finance, Audit and Risk Management Committee chaired by Guy Chalkley.
- » The Policy and Strategy Committee chaired by Paul Simshauser.
- » The Asset Management Committee chaired by John Cleland.
- » The Gas Committee chaired by Craig de Laine.
- » The Transmission Committee chaired by Seán McGoldrick.
- » The Safety Committee chaired by Stephanie Unwin.
- » The EN2024 Board Representative Simon Emms.



MEMBERS



AFFILIATES

The ENA affiliate program offers business, government, academia, and supply chain partners a new way to connect with and support the work of Energy Networks Australia.

Our affiliates, at 30 June 2023, were:

- » ADAPT Australia
- » Aeropower
- » Amokabel Australia
- » Boston Consulting Group (BCG)
- » Clean Energy Finance Corporation (CEFC)
- » Ecojoule Energy
- » Electrix trading as Omexom Australia
- » Energy Users Association of Australia (EUAA)
- » KPMG
- » Oakley Greenwood
- » Osmose Australia
- » S&C Electric Asia Pacific
- » Schneider Electric
- » Spark Infrastructure
- » Vector, New Zealand

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