



Annual Review

Financial Year 22

People. Power. Possibilities.





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Transgrid operates the most important electricity transmission network in Australia, maintaining and upgrading the backbone of the National Electricity Market. Transgrid is leading the transition to a clean energy future, and in the process making a better power system for Australians.

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Acknowledgement of Country

In the spirit of reconciliation Transgrid acknowledges the Traditional Custodians of the lands where we work, the lands we travel through and the places in which we live.

We pay respects to the people and the Elders, past, present and emerging and celebrate the diversity of Aboriginal peoples and their ongoing cultures and connections to the lands and waters of NSW and the ACT.



FY22 Highlights

COVID-19 brought with it a new set of challenges for Transgrid. As always, our highest priority was the health and safety of our people, customers and the community while maintaining the continuity of the supply of electricity.

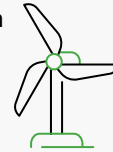
Network reliability
99.99999%



Major projects investment
\$549m

Renewable energy projects in operation or under construction

12,000MW



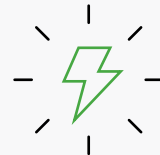
Data Services business grew year on year

24%



Regulated asset base across ACT and NSW

\$7,614b



Gigawatt hours of electricity moved

65,900GWh

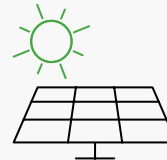


Total revenue

\$945.3m

Female apprentices

50%

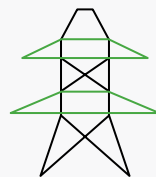


Households connected to renewable energy

4m

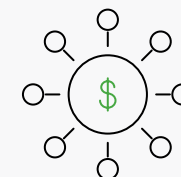
Lost time injury frequency rate decreased by

57%



Transmission lines and cables

13,160km



Prescribed capital expenditure invested in the network

\$250.8m



Chairman's message

“As we enter a crucial decade for Australia’s energy transition, Transgrid has sharpened its focus on building the critical transmission infrastructure needed to achieve a clean, green energy future.”

Jerry Maycock
Chairman



Getting future-fit

FY22 was a year of significant transformation for Transgrid as we strengthened our capability and capacity to play a central role in delivering the Australian Government’s Rewiring the Nation strategy, and the energy infrastructure of the states and territories that are so critical to the decarbonisation of our economy.

In November 2021, the Board was delighted to appoint Brett Redman as our new Chief Executive Officer. Brett’s broad expertise and experience in the energy sector, in particular his focus on the transition to a clean energy future, have us well placed to lead industry into a new era of energy transformation.

To guide our transformation, we have also refreshed Transgrid’s corporate strategy to include ambitious goals, focused on strengthening stakeholder and community trust, fast-tracking the delivery of critical infrastructure and reducing wholesale electricity prices for Australians. Brett has also overseen significant renewal across the executive leadership team to provide additional depth and breadth as we continue to grow and transform the business.

We have also taken the opportunity to evolve our corporate brand to reflect this evolution in our business, including our commitment to Reconciliation with Yura. Gili. Nanga, the indigenous interpretation of Power. People. Possibilities - as we strive to create stronger connections with the traditional custodians of Country.

Refreshing the Board

Our Board renewal cycle saw the retirement of Rick Francis, Dr Keith Turner, Steven Fitzgerald and Kevork Sahagian during the year. I extend my sincere gratitude to each of our retiring directors for their significant contributions during their respective tenures.

Joining the Board in their first terms as non-executive directors are Jan Brand, Stasha Prnjatovic and Deion Campbell, all of whom bring significant capabilities from across the infrastructure and utility sectors to help accelerate the delivery of Transgrid’s vision.

Building a green grid

As we work with Government’s across the eastern seaboard to deliver on the nation’s clean energy future we successfully delivered the \$235 million Powering Sydney’s Future project which secures electricity supply to the Sydney CBD for decades to come. The project, delivered on time and on budget, is ensuring a reliable electricity supply to more than 800,000 residents and businesses to help power the nation’s largest economy.

The \$236 million Queensland-NSW Interconnector upgrade was also completed on time and on budget in June this year. The work included upgrading 300 kilometres of existing transmission lines, allowing more energy to flow between the two states and reducing constraints on the NSW transmission network.

Transgrid also continued to innovate to serve customer needs for safe, reliable and secure energy. We pursued innovative technologies and services as non-network alternatives to conventional projects. For example, instead of adding new poles and wires, we installed award-winning SmartValve units in the Victoria-NSW Interconnector upgrade, which will unlock enough extra energy to power 30,000 homes.

Importantly, our grid-scale battery trials gathered momentum as we began operating the state’s first large-scale battery at our Wallgrove substation in Western Sydney. We also identified opportunities to use grid-scale battery energy storage systems in several areas to reduce or defer the need for new transmission. We have also commenced planning one of the world’s largest renewable mini-grids, which will provide backup power supply to Broken Hill, replacing conventional diesel generators.

On behalf of the Board, I would like to thank our new CEO Brett Redman, the Executive Leadership Team and everyone at Transgrid, for their hard work during a fast-paced and dynamic year. Together with the community and our stakeholders, we are creating a strong, flexible, secure and sustainable electricity network for all Australians. We are proud of our collective achievements and look forward to continuing to play our part in the nation’s historic energy transition.



CEO's report

“As many have astutely commented, there will be no transition without transmission, that is why Transgrid is making the bold and necessary transformation to enable the fast-tracking of the critical infrastructure backbone of the Nation’s clean energy future.”

Brett Redman
Chief Executive Officer



Transition acceleration

Transgrid’s strategy is driven by the needs of our customers and ultimately all Australians who are reliant on our sector to deliver cheaper, cleaner and more reliable energy to their homes and businesses.

As the nation transitions from fossil fuels to renewables – now faster than expected – Transgrid’s role in connecting renewable energy sources to the grid is critical to enabling a successful and timely transition. Likewise, our renewables business Lumea, is helping deliver the infrastructure that will enable periods of 100 percent instantaneous renewable generation by 2025.

In FY22, Transgrid responded to this reality by building the infrastructure to enable the integration of existing and future wind, solar and hydro power. Our transmission projects: EnergyConnect, HumeLink and Victoria to NSW Interconnector West will get energy to market, filling the gap left as coal-fired generators are retired. These projects will form the country’s energy superhighway.

In June 2022, construction started on Australia’s largest electricity grid project, the \$1.8 billion EnergyConnect interconnector, which will enable the sharing of energy between NSW, South Australia and Victoria for the first time. This critical project will allow integration of renewables in the state’s south-west and provide the best chance of meeting the nation’s clean energy targets while helping to drive down the cost of wholesale electricity.

During the year, we progressed planning for the VNI West project, which will enable more energy sharing between NSW and Victoria. This will converge in Wagga Wagga with EnergyConnect and another Integrated System Plan priority project, HumeLink.

HumeLink is a key component in a robust, resilient and reliable future grid. It will enable the successful and rapid integration of new, clean energy from renewable energy zones and unlock the full capacity of Snowy 2.0. This energy, from wind, hydro and solar farms, will be shared across NSW, the ACT and the broader National Electricity Market.

Together with the other energy market stakeholders, we are bringing forward infrastructure delivery schedules and driving innovation at pace.

This rapid acceleration is essential to meeting the Government’s 2030 target of cutting emissions by 43 per cent, which means boosting renewable electricity production to 82 per cent of our electricity supply.

In this era of rapid change, Transgrid is also ensuring supplies continue to be safe, secure and reliable for consumers throughout the energy transition.

Planning for this critical decade

As the authority on the NSW power system, we provide advice and direction to keep the power on through a rapidly evolving environment.

With acceleration front-of-mind, we have been investigating a proposal to integrate HumeLink, EnergyConnect and VNI West into a single simultaneous program, delivering the projects earlier and cheaper, which will help put further downward pressure on consumer bills and kickstart the Australian Government’s Rewiring the Nation strategy.

We have progressed our draft 2023-28 Revenue Proposal, which sets out our planned expenditure, revenues and transmission prices for the next regulatory period. If approved by the Australian Energy Regulator, our proposal will deliver a safe, secure and reliable service while supporting the energy transition and addressing our key operational challenges and the customer priorities. It will also upgrade our network to address high load growth, allowing us to continue to meet voltage stability, thermal limits and reliability standards.

Prioritising community benefits and business sustainability

As the owner and operator of Australia’s most essential electricity network, we are on the frontline of delivering sustainable infrastructure and services that are leading the nation’s transition to a clean energy future. In doing so, we are cognisant of our role in continually improving our performance across all aspects of the United Nation’s sustainable development goals and our broader role supporting the communities in which we work.

Accordingly, this year, we enhanced our ESG Program to include key performance indicators, targets and improvement initiatives to uplift performance in our sustainability priority areas.

As we build new infrastructure in the community, we also continue our focus on sharing employment and economic opportunities and benefits with First Nations peoples. This year saw the launch of a new partnership with Charles Sturt University to develop training, education and employment pathways for students and First Nations people to support our EnergyConnect and HumeLink projects.

We also respect and encourage meaningful engagement with our First Nations people, residents, businesses and community members affected by our projects and recognise the important role they play in enabling the Nation's superhighway and transition to a clean energy future.

In 2021, we established the Office of the Landowner and Community Advocate, led by former NSW Fair Trading Commissioner Rod Stowe, to ensure the needs and expectations of landowners and communities are adequately represented in the planning and delivery of transmission projects. In addition, we have implemented all 20 of Mr Stowe's recommendations including the establishment of independent Community Consultative Groups.

Looking out for our people

The safety and welfare of our people and the broader community are our highest priorities. This year our safety performance was industry-leading, with the best results since 1998. One of our safety initiatives, was partnering with technology provider Infravision, to develop a safer methodology for stringing transmission lines using drones rather than helicopters.

During the year, we also took important steps to increase female representation at Transgrid, including launching a female pre-apprenticeship program in electrical trades.

We also raised primary parental leave from 14 to 20 weeks providing access to this leave at any stage within 12 months of their child's birth, providing increased flexibility for families to juggle primary care in the first important year. The new policy levels the playing field, enabling parenting responsibilities to be shared and giving women the ability to return to the workforce.

Finally, I would like to thank the Transgrid team, including our delivery partners, who have worked hard to provide our customers with safe, reliable and secure energy. Our professional, talented and dedicated people are also the backbone of our efforts to rapidly upgrade and expand the grid and accelerate Australia's transition to a clean energy future.





Who we are

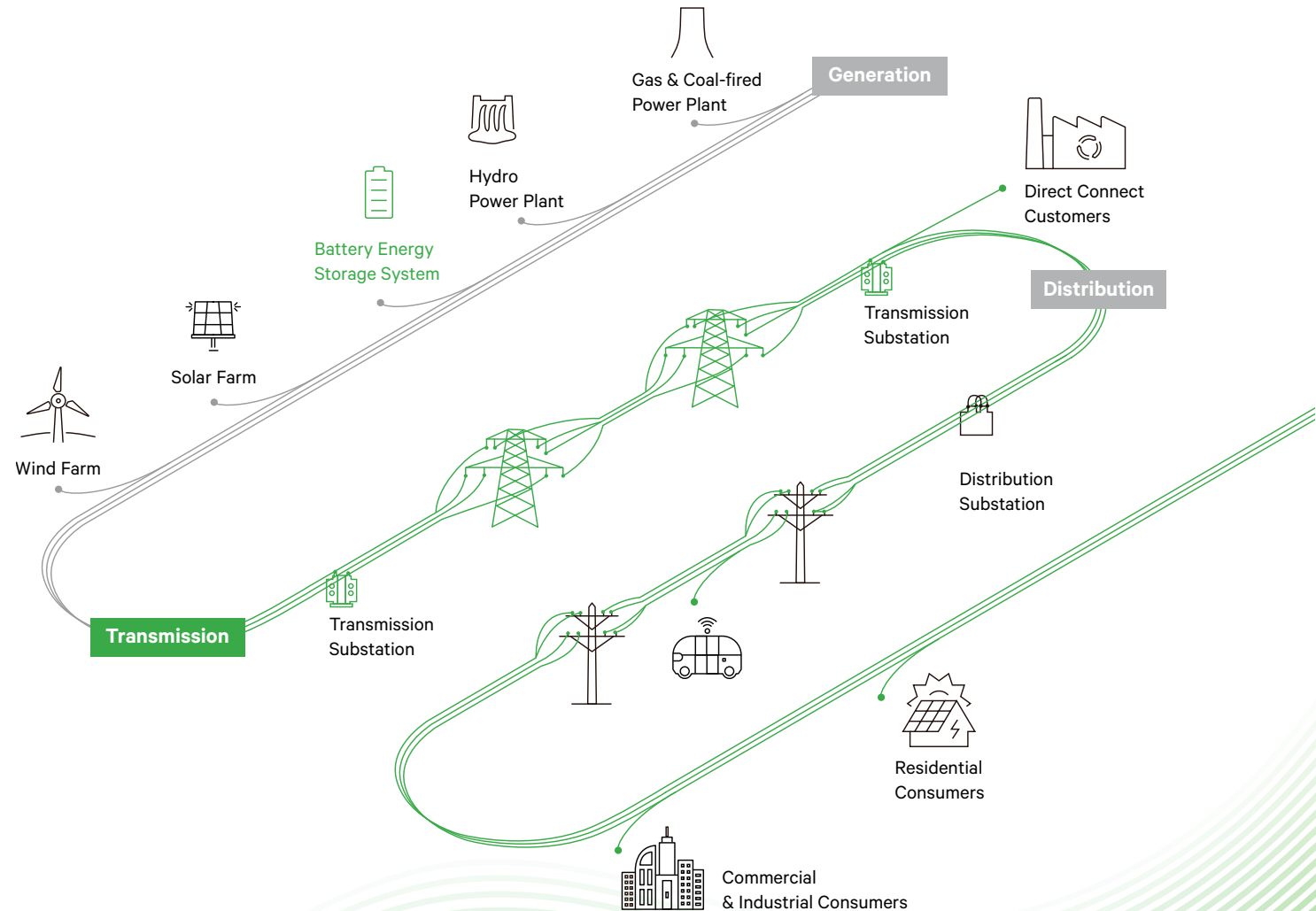
Transgrid operates and manages the high voltage electricity transmission network in NSW and the ACT.

The network connects more than three million homes, businesses and communities to a safe, reliable and secure electricity supply.

The transmission network transports electricity from generation sources such as wind, solar, hydro, gas and coal-fired power plants to large directly connected industrial customers and the distribution networks that deliver it to homes and businesses.

Transgrid's NSW and ACT network consists of 121 substations and switching stations, 13,052 kilometres of high voltage transmission lines, 109 kilometres of underground cables and five interconnections to Queensland and Victoria. The network is instrumental to the electricity system and economy, facilitating energy trading between Australia's eastern states.

Transgrid's role in the electricity supply chain



Our approach

People are at the heart of everything we do, from providing essential service on the network to transforming and planning our business for the future.



Vision

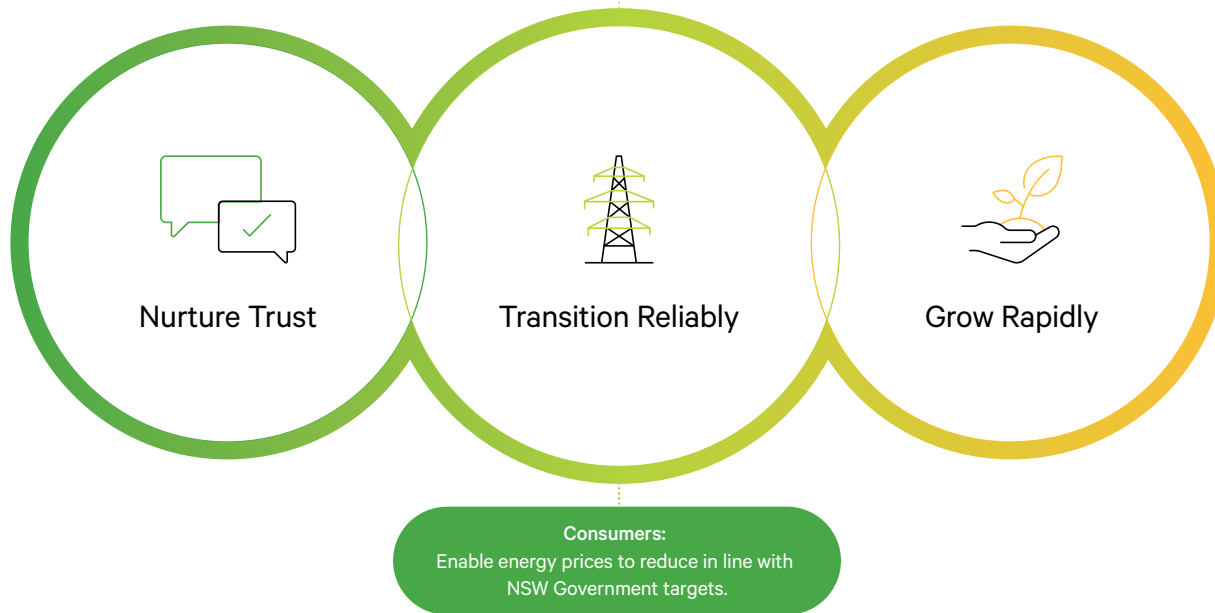
Lead the transition to a clean energy future



Purpose

Make a better power system for Australians

Our Three Pillars are:



Values and behaviours

In 2022, we refreshed our corporate values. Through workshop sessions, attended by 900 people, we agreed to eight organisational wide behaviours – our commitments – to help our people embody our values.

During the year, we embedded our values and commitments across core people processes, including recruitment, reward and recognition, and our learning programs.

Transgrid values and commitments



Safety

- Check in regularly on each other's safety and wellbeing
- Lead safety for myself and others and provide support to make safe choices



Achievement

- Recognise and celebrate the success of our diverse individuals and teams
- Seek and encourage better ways of doing our work and share the learnings



Integrity

- Deliver on my promises and commitment
- Take ownership for my decisions and actions



Service

- Listen actively, respond with respect, and assume positive intent
- Represent the customer and the community in what we do to add value

We use four measurable strategic goals to enable organisational planning and guide the subsequent strategic change and business planning process. Our approach to managing Environmental, Social and Governance (ESG) enables success against each of the goals.

We have identified and prioritised our ESG issues, building an ESG Program that coordinates and uplifts ESG activities across the business. Some highlights have been included in this Annual Review, with the companion 2022 Sustainability Report providing greater detail.

Refreshing our brand

A refreshed brand to reflect our innovative, exciting and important work

During September 2021, we launched our brand refresh that included:

- A new logo, designed to reflect what's at the heart of our organisation; reliability, innovation, and progress. It represents an axis of endless possibilities and transformation.
- Revised colour palette, brand style guidelines and the tagline of People. Power. Possibilities. which represents our focus on delivering a clean energy future.



The brand refresh won the Better Future Sydney Design Awards 2022 for Best Graphic Design - Identity and Branding (Corporate) This award celebrates creative and innovative design in the traditional or digital visual representation of ideas and messages.





Energy transition

Our Energy Vision

In October 2021, we released our Energy Vision – a vital piece of work guiding our long-term planning and supporting other energy system stakeholders in formulating policies, reforms and investments that enable the rapid and orderly decarbonisation of our energy system.

Using our modelling, we have determined the least cost evolution of the energy system and a pathway to ensure our network is robust, resilient and flexible to future challenges and opportunities.

Developed in collaboration with independent experts, CSIRO, ClimateWorks Australia and The Brattle Group, our Energy Vision models the implications of six possible future scenarios for Australia's energy system over the coming years to 2050.

The scenarios range from a future based on current trends, to a backwards-looking sharp slump in Australia's economic growth, to more optimistic scenarios in which Australia hits the Paris Agreement's aspirational 1.5°C decarbonisation target and becomes a global, clean energy superpower.

Our analysis indicates that Australia's energy system is critical to enabling a decarbonised economy and key to seizing the opportunity to grow our economy and jobs in a clean energy future. The transition towards a clean energy future can create immense opportunity for Australia – if we set ourselves on the optimal course.

Our evidence-based vision is for Australia to become a global clean energy leader, benefitting communities, the economy and the environment. Modelling shows that, with the right policies in place and with all stakeholders working together towards a mutually agreed goal, this future is highly achievable. But the pace of change needs to rapidly accelerate.

Decarbonised economy

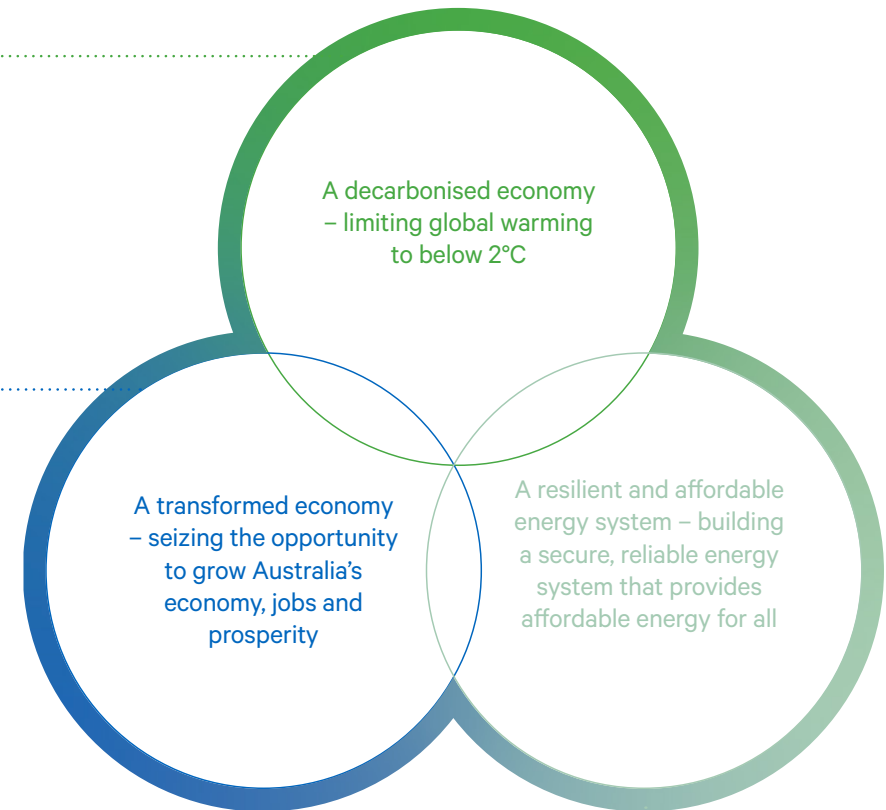
- **Net zero emissions** achieved economy-wide well before 2050
- Strong **energy efficiency**, 100% **renewable energy**, **electrification** of transport, industry and buildings, **fuel switching** and **carbon offsetting** are key pillars to decarbonise our economy

Transformed economy

- **Creating jobs and upskilling workers** for new industries
- Harnessing Australia's renewable energy potential to become a global clean energy leader
 - > **Leadership in emerging sectors** (e.g. battery manufacturing, mining of battery resources)
 - > The **revitalisation of our industries** to manufacture and export green products (such as **steel, aluminium** and other metals)
 - > **Export growth** through zero emissions energy (such as **hydrogen** and electricity)

Resilient and affordable energy system

- A **resilient energy system** in the face of climate change
- A **secure** and **reliable** energy system
- **Affordable electricity**



Innovation

Transgrid is working with a broad range of stakeholders to build the energy system needed to thrive in a clean energy future. Our partners in this important work include State and Federal Governments, the Australian Energy Market Operator (AEMO) and other transmission and distribution network service providers.

Ensuring transition happens reliably

The electricity system is transitioning away from coal and towards renewables at an accelerating rate – even faster than expected. Transgrid remains focused on ensuring that energy supplies continue to be safe, secure and reliable for consumers throughout the energy transition. In FY22, we developed a System Security Roadmap to support the rapid transition we anticipate, ensuring system security capabilities, assets and services will be in place when they are needed.

By 2025, AEMO forecasts that the NEM could experience periods with up to 100% instantaneous renewable energy penetration. This will be rare at first but, by 2030, dispatch periods at 100% renewables are forecast to be quite common. Recognising we need to be ready for these conditions when they appear, during the year, Transgrid has set a goal to 'lead the implementation of a transmission system capable of operating at 100% instantaneous renewable generation by 2025 to safely deliver reliable energy to consumers.'

The power system is becoming more distributed, dynamic and unpredictable, and increasingly complex to operate. Looking ahead, system operators will need better planning capabilities and tools to support decision making in real time. As part of the System Security Roadmap, Transgrid identified the new tools and capabilities needed to ensure our control rooms continue to be fit-for purpose to operate securely and reliably, and how they must evolve to reflect the changing composition of the power system. We have now commenced designing and delivering these tools.



Decoupling system security from coal

The power system currently relies on a certain number of coal or gas generation units being online at all times to keep the system operating securely. These units, which provide critical system security services, are starting to retire and operate less frequently. By 2024-25, AEMO forecasts there may be periods when the minimum coal units required for system security in NSW, will not be available.

In FY22, we accelerated our efforts to develop system strength from other sources, planning how we will decouple system security from thermal generation - building resilience by ensuring system security services are always available, even when thermal units are offline.

Developing the world's largest renewable energy mini-grid

In FY22, we selected a new type of renewable energy and storage mini-grid to provide backup power supply to Broken Hill, instead of using conventional diesel generators. The new mini-grid will use compressed air storage in a disused mine, in conjunction with existing local wind and solar generation. This initiative will be an Australian first and one of the largest renewable mini-grids to be created worldwide. It's expected to create at least 260 construction jobs and a further 70 ongoing permanent roles.

Unlocking capacity on the existing transmission network

During the year, our people continued to come up with innovative solutions to get more out of our existing energy infrastructure. For example, the Victoria-NSW Interconnector upgrade will unlock an extra 170MW of additional energy to the NSW grid, enough to power 30,000 customer homes. Instead of building new 'poles and wires', we are installing SmartValve units. The system works by detecting areas of congestion in the network and automatically redirecting flows to less congested lines, helping remove bottlenecks on the grid.

This is the first time SmartValve technology has been deployed on a 330kV network, on a large scale, in the Southern Hemisphere. The project was significantly less expensive and faster than the alternative of building or upgrading a transmission line.

Exploring new technologies

For the second year, Transgrid partnered with EnergyLabs as part of the 2022 Energy Scaleup Program, collaborating with energy tech start-ups to explore new smart grid technologies.

INNOVATION (CONTINUED)

Trialling grid-scale batteries

We are using the Wallgrove battery to provide synthetic inertia services, while renting the rest of the battery to a market participant to trade in the wholesale energy and ancillary services markets.

By ‘value stacking’ co-optimised services, we will drive efficiencies and reduce costs for consumers. In late 2022, we expect to commission ‘Virtual Machine Mode’ on the battery, when we start testing and verifying its capabilities to provide system security services. If successful, we hope to demonstrate that batteries may be able to provide these services at a lower cost than other technology options.

During the year, we also identified opportunities to use grid-scale Battery Energy Storage Systems (BESS) to reduce or defer the need for new poles and wires. BESS deliver services more quickly than conventional transmission infrastructure can be deployed, avoiding the risk of supply outages in the short term.

At year end, areas where a BESS had been identified as part of the preferred option to maintain a reliable electricity supply included:

- Bathurst, Orange and Parkes – Batteries at substations at Panorama and Parkes can help to manage voltage variations during high demand periods.
- NSW North West Slopes region – A battery in the Gunnedah area can manage thermal constraints and voltage variations during high demand periods.
- South-Western NSW – A three-year contract, with a BESS currently in development in the area, can provide network support services in the interim while a new transmission line is constructed and commissioned.

These projects are among the first in the NEM where solutions involving large-scale batteries have outperformed other options throughout the regulatory test (without subsidies).

In FY22, Transgrid continued to trial the use of grid-scale batteries. In December 2021, the first large-scale grid battery in NSW began operation at our Wallgrove substation in Western Sydney.



Major projects update

During the year, our major projects marked key milestones including the start of construction on Transgrid's \$1.8 billion EnergyConnect project which will help revolutionise the National Electricity Market. Work on upgrades to interconnectors between Queensland and NSW (QNI) and Victoria and NSW (VNI) continued to approach completion with the Powering Sydney's Future (PSF) project reaching the final stage of work to secure the future energy supply to Sydney CBD and surrounds.

PSF - Powering Sydney's Future

As Sydney's population grows, this project is securing a reliable electricity supply for the city through economically viable solutions with minimal community and environmental impacts. In May 2022, we completed installation of a new 20-kilometre 330kV underground cable.

During construction, we also installed conduits for extra cables, to minimise disruption to local communities when extra network capacity is required in the future. PSF created more than 140 jobs and has injected \$285 million into the NSW economy.

QNI - Queensland to NSW Interconnector

QNI upgrade is almost complete – a critical step in improving the power transfer capacity between Queensland and NSW.

The two-year project, which created 280 jobs, has included network augmentation works at Liddell, Muswellbrook, Tamworth, Armidale and Dumaresq substations, as well as several 330kV transmission line upgrading works. Progressive energisation and inter-regional testing is now being coordinated with AEMO.

VNI - Victoria to NSW Interconnector

This project to upgrade VNI will enable better power flows between the states. The project includes installing SmartValves power flow controller technology in the Yass substation in NSW and our new Stockdill substation in the ACT.

By late June 2022, the VNI upgrade was more than 75 per cent complete, with completion scheduled by late 2022. Civil works were completed at the Stockdill substation, with SmartValve energisation completed in March 2022. The SmartValves are now undergoing an extensive commissioning program prior to entering service, which will then unlock an extra 120MW of additional energy to the NSW grid. SmartValves will be installed at our Yass substation in NSW by end of 2022. When complete, this will unlock a further 50MW of energy.

We are building the transmission super-highway which will transform the energy supply for millions of Australians.



MAJOR PROJECTS (CONTINUED)

EnergyConnect

In June 2022, Transgrid started construction on Australia's largest electricity grid project, the \$1.8 billion EnergyConnect. The new 900km interconnector will enable energy sharing between NSW, South Australia and Victoria for the first time.

The critical project will help to integrate renewables, reduce the nation's carbon emissions and drive down the cost of wholesale electricity. Transgrid started building the 700km NSW section from the South Australian border to Wagga Wagga while South Australia's ElectraNet has commenced construction of the remaining 200km from the Victorian border to Robertstown, SA.

Over the course of the project, Transgrid's construction partner SecureEnergy will erect 1,500 new transmission towers, using more than 30,000 tonnes of steel.

VNI West - Victoria to NSW Interconnector West

In April 2022, Transgrid entered into an underwriting agreement with the Federal Government to develop the Victoria to NSW Interconnector West (VNI West), a major transmission infrastructure project proposed to secure the electricity supply and boost energy sharing between the two states.

The new 500kV interconnector, if approved by the Australian Energy Regulator, will improve supply reliability and increase customer access to cheaper, cleaner electricity.

The Australian Energy Market Operator identified VNI West as an actionable project in its 2022 Integrated System Plan for the National Electricity Market. The Federal Government and Transgrid are working collaboratively to achieve VNI West's early works.

HumeLink

Transgrid has commenced advanced planning for HumeLink, which will deliver \$491 million in net benefits and represents a once-in-a-generation investment in Australia's energy future.

The new 500kV transmission line, which will connect Wagga Wagga, Bannaby and Maragle, is one of the largest projects proposed since the formation of the National Electricity Market.

In July 2021, Transgrid published its Project Assessment Conclusions Report (PACR) outlining how it will deliver the new transmission line to enable the successful and rapid integration of clean energy from renewable energy zones and Snowy 2.0. This energy, from wind, hydro and solar farms, will be shared across NSW, the ACT and the National Electricity Market.





Delivering safe, secure, reliable energy

We continued to deliver a safe, secure and reliable network as a mission critical priority.

Energy affordability

We are working to reduce the price of electricity for customers by connecting new low-cost generation and improving the ability to trade electricity between states through our interconnector projects. The major projects we are progressing under the Integrated System Plan (ISP) will support low-cost renewables and put downward pressure on wholesale energy prices. For every dollar we spend in transmission, our customers get back between three and nine dollars in lower wholesale energy costs.

Transgrid's major projects will support the energy transformation in NSW by strengthening, expanding and enhancing the network, increasing system stability and underpinning competition within the wholesale electricity market to drive down prices for consumers. We are constructing a number of major transmission projects in line with AEMO's 2022 ISP, that will improve affordability for all energy customers.

Asset management

Maintaining a safe network

We continued to participate in a wide range of industry working groups and forums, with both Australian and international network service providers, enabling Transgrid to keep abreast of industry best practice approaches, emerging issues and trends.

Repairing after the bushfires

The FY20 bushfires impacted 9 per cent of the Transgrid network, damaging infrastructure and creating hazardous access conditions. After the design, planning and procurement during FY21, around 50 per cent of the infrastructure repair works and access remediation works were completed in FY22 at a total cost of \$20 million.



Asset management programs completed during FY22

- Gadara Secondary Systems Renewal
- Marulan Secondary Systems Renewal
- Line 3W - Kangaroo Valley- Capital - Refurbishment
- Sydney West Dynamic Voltage Support Refurbishment
- Line 8 - Marulan - Dapto - Refurbishment
- 22 - Sydney North - Vales Point Line Refurbishment
- Armidale 415V AC Distribution Replacement
- 132kV TL Wood Pole Replacement – Line 99A Uranquinty to Finley
- Line 959-92Z Renewal
- Tomago Substation Renewal
- SCADA CIS20 Implementation

Repairing with drone technology

Drones were used to assist with safely restringing transmission lines near Tumut in the challenging environment of the Snowy Mountains. Individual conductors were replaced by using the drones to string in close proximity to existing overhead earth wires/conductors, fly through the centre of transmission towers and tension string above existing vegetation. Using the new stringing methods delivered significant cost savings, reduced outage windows, improved worker safety and eliminated the need for a full rebuild of damaged transmission lines.

Works on other major lines, have commenced and are expected to be completed in FY23. During the year, an independent review of Transgrid's approach to managing bushfire risks found no minor concerns.

Upgrading metering systems

As part of AEMO's transition away from the 15-minute market settlement, we upgraded our market metering systems to be five-minute settlement capable.

More than 740 meters of the network were upgraded and supported by metering database updates, changes to AEMO's market settlement database and updates to metering design documentation.

The project has ensured our ongoing compliance with NER, Metering Coordinator and Metering Provider compliance obligations.

Strengthening substation physical security

We continued to roll out Transgrid's physical security upgrade program, with Kemps Creek Substation completed in June 2022. This substation now has intruder tracking, smart-site monitoring and incident review capabilities. The new technology already supports intelligent security analytics to detect suspicious activities prior to breaches occurring. In future, it can be upgraded with biometrics and facial recognition security.

Preparing for the digital substation future

Transgrid's new digital substation in Stockdill is IEC 61850-9 compliant. Digital substations are smaller, easier to maintain and have reduced cabling and trenching requirements.

The modern grid depends on a communication network. During the year, we began the move to a modern MPLS-TP Ethernet-based network, replacing the current fleet of Synchronous Digital Hierarchy multiplexers. This new technology will increase the bandwidth of our communications systems, allowing us to enhance our real-time asset monitoring and our operational capabilities within an increasingly complex energy system. Over \$15 million has been committed for the entire project, with approximately 100 locations planned to be transitioned to the MPLSTP technology suite.





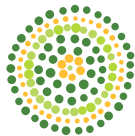
Working towards a sustainable future

Respecting our First Nations peoples

When Transgrid launched the refreshed brand in September 2021, an important aspect was the creation of an Indigenous representation of our brand.

Designed and created by Sherrie Anderson, Yura Ngura Indigenous Advisory Manager and her daughter, Ava, the Indigenous representation depicts icons representing: People. Power. Possibilities.

Our hi-vis work wear also incorporates an acknowledgment of the Traditional Custodians of the lands on which we work.



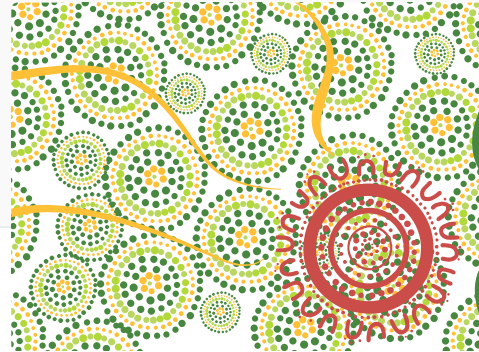
YURA
People.



GILI
Power.



NANGA
Possibilities.



May 2022: Port Macquarie man Corey Tutt winning the Transgrid Indigenous Achievement Award at the 7NEWS Young Achiever Awards NSW & ACT.

Corey, was recognised for his work supporting remote schools and creating books like First Scientists and the DeadlyScience series with cultural experiences that help young people understand Australia's history with science.

Reconciliation Action Plan

In FY22, we finalised delivery of our Innovate RAP and were invited by Reconciliation Australia to move to a Stretch RAP in recognition of the strong program of work we have achieved and embedded across the organisation.

In March 2022, our Executive team held a RAP strategy day to begin planning our initiatives for the Stretch RAP.

We continued to raise awareness of Reconciliation initiatives across the organisation through a strong cultural learning program, regular team updates and a quarterly newsletter.

Yura Ngura Indigenous Advisory

The Yura Ngura (meaning People and Places) Indigenous Advisory team is committed to driving reconciliation through inclusive and respectful engagement with Indigenous Australians across the communities in which we work.

Connecting community leaders with our business leaders, we advocate for working in a culturally safe and inclusive manner that promotes sustainable development and community partnerships.

The team supports, coordinates and provides advice to work beyond compliance and industry targets, with a focus on strengthening internal awareness, understanding, and consideration of Indigenous Australians.

Government engagement with our major projects

In FY22, we continued to work closely with the NSW Government and new Federal Government to develop infrastructure resources that meet the future needs of consumers in our cities and across regional Australia. One key priority was working with governments on ways to accelerate the energy transition to renewables.

As the backbone of the essential infrastructure is predominantly located in regional areas, we will continue to facilitate ongoing engagement with members of Parliament and impacted Councils. This is part of our broader engagement program to ensure local communities are fully engaged throughout each stage of the project.



CEO Brett Redman, NSW Treasurer and Minister for Energy Matt Kean and Chair Jerry Maycock at the commissioning of Tamworth.

Connecting with our stakeholders

The Transgrid Advisory Council (TAC) is an advisory body that acts as Transgrid's principal stakeholder forum. It provides consumer and industry insights to better improve the value of Transgrid's transmission services in NSW and the ACT. The TAC represents a broad range of energy consumers, industry stakeholders and subject-matter experts. Ongoing engagement and collaboration with the TAC on major projects, Revenue Resets, RIT-Ts and other policy matters enables consumer and stakeholder perspectives to be integrated into Transgrid's decision-making processes.

In FY21, the TAC was appointed as Transgrid's primary consultation vehicle for the 2023-28 Revenue Reset. These TAC meetings and working groups, have helped inform and direct our thinking on the delivery of major transmission projects and identified key areas to improve the way we work with energy consumers and industry stakeholders.

Energy Charter

Transgrid is one of the founding organisations and first signatories to the Energy Charter, formally launched in January 2019. Together with the other Charter signatories, we are working to drive cultural change throughout the industry and deliver better outcomes for all energy consumers.

In September 2021, we delivered our third Energy Charter Disclosure, reporting on our progress to meet the Energy Charter's five principles, in particular, improving our processes for engaging with landowners as we plan and deliver transmission projects. In our fourth year as a signatory, we are continuing our commitment to improve the ways in which we work with landowners and communities. As we prepare to lodge our FY22 Disclosure, we look forward to reporting on our Maturity Model, progress in social licence issues and how we are striving to deliver better outcomes for all energy consumers.

Placing the community at the centre of our decision making

The transition to a lower carbon future requires expanding our existing transmission network to ensure more renewable generation can connect to the system. We recognise the vital role that landowners and the community have as we plan and deliver our projects and network operations. We are dedicated to continuously improving our engagement to support our decision making and deliver community benefits.

In 2021, we established the Office of the Landowner and Community Advocate to represent the needs of landowners and communities affected by transmission projects, appointing former NSW Fair Trading Commissioner, Rod Stowe, as Advocate, reporting to our CEO and Board.

We are now re-setting our processes. This includes establishing independent Community Consultative Groups to provide local communities and landowners with a structured, ongoing engagement forum to provide input about our projects. We have also implemented a Landowner Assistance Program to provide confidential, independent support and counselling services to impacted landowners affected by Transgrid's work – across all projects and maintenance activities.

This year, we participated in the #BetterTogether Landholder and Community Engagement initiative. We worked with a number of signatory partners and representatives from state and national landowner and farming groups to develop the Better Practice Landholder and Community Engagement Guide, which was launched with the National Farmers Federation. The Guide helps transmission businesses and landowners navigate the processes of working together as we plan and deliver new assets.

Guarding against modern slavery

Transgrid acknowledges our fundamental responsibilities to respect human rights and address modern slavery risks in our supply chain. We support the Commonwealth Modern Slavery Act 2018 and are committed to continually improving the way we identify, address and guard against modern slavery risk. Our three-year Modern Slavery Roadmap sets out a long-term program of works to address modern slavery. Actions this year include updating modern slavery standard purchasing conditions, continuing sector collaboration with Energy Procurement Suppliers Association and training for our Supply Chain team on modern slavery risks.

GRESB Infrastructure rating

Transgrid was awarded a 2022 (FY21) 4-star GRESB Infrastructure ESG benchmark rating with a score of 93/100, ranking third out of nine electricity transmission networks globally.

As we construct and maintain transmission lines and cable routes, we take all reasonable steps to protect the natural habitat of endangered species and areas that may hold cultural significance to First Nations peoples.

Addressing our GHG emissions

Transgrid reports on Scope 1 and 2 greenhouse gas (GHG) emissions as required under legislation. This year, for the first time, we also quantified the Scope 3 GHG emissions occurring indirectly in our value chain, which Transgrid is also responsible for. We also undertook a comprehensive forecasting exercise of emissions out to 2050 as a basis for considering credible emissions targets.

As transmission line losses are the largest component of our emissions footprint, our primary reduction driver is the speed at which the energy system transitions to one based on renewable energy. We are hastening this process by building interconnectors, and supporting development of renewable energy zones, investing in battery technology – and, through Lumea, physically connecting renewable generators to the network.

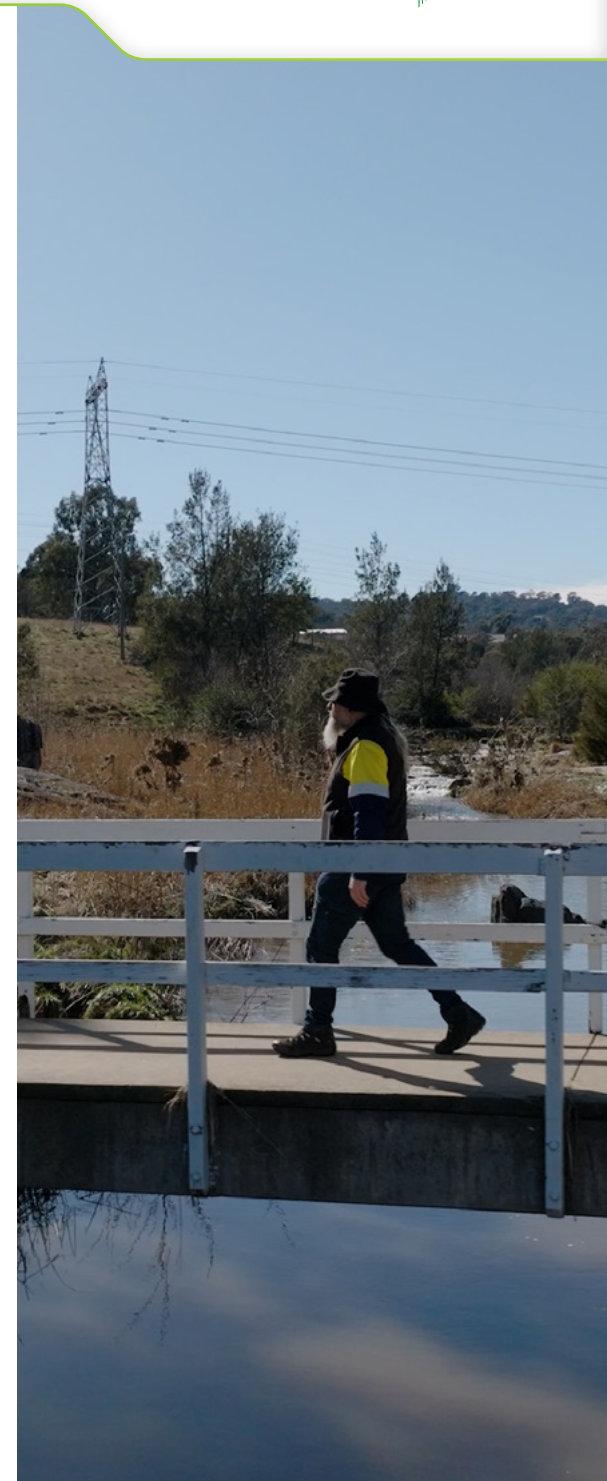
The main sources of our Scope 1 emissions are Sulphur Hexafluoride (SF6) gas leakage and diesel emissions from transport. SF6 is an electrical insulator with a high global warming potential used by circuit breakers, instrument transformers and gas insulated switchgear. We are continuing to explore SF6 alternatives and transitioning our assets to low carbon alternatives. We also completed a process review to improve the accuracy of how we record our SF6 gas usage across the business.

Conserving and enhancing biodiversity

Biodiversity plays an essential role in supporting healthy ecosystems and is critical to preserving our natural environment for future generations. During the year, we assessed the impact of our major augmentation projects on biodiversity and worked with regulators to identify appropriate biodiversity offsets, including identifying and securing properties to establish long-term biodiversity values.

We use a robust risk assessment process to protect the natural habitat of endangered species living near our assets, including consulting with stakeholders, such as the National Parks and Wildlife Service and landowners, to help gauge biodiversity risks. We incorporate this knowledge in due diligence assessments and update our risk assessment annually based on government changes to threatened species listings.

Before starting works that involve ground disturbance or vegetation removal, we use a geospatial information system to identify any potential biodiversity impacts. Where potential impacts are identified, environmental professionals specify any restrictions or mandatory controls required to authorise the works. Our approach is to comply with legislative requirements and balance the need to both manage biodiversity impact risks and also mitigate bush fire risks in a practical and efficient manner. Transgrid people and delivery partners must adhere to our schedule of approved pesticides, which we review periodically to ensure we continue to address stakeholder expectations regarding the use of pesticides in the environment.



Community Partnerships Program

Our Community Partnerships Program benefits communities in areas where our assets are located or under development. Through the program, we provide not-for-profit groups with funding to help deliver initiatives that will have a tangible and lasting legacy for local communities. Priority areas include: mental health, women, people with disabilities, education, environmental sustainability and safety.

Community Partnerships Program beneficiaries awarded during FY22

Organisation	Location
1st Tumut Scout Group	Tumut
Addison Road Community Organisation	Sydney
Bookham Cricket Club	Bookham
Brungle Tumut Local Aboriginal Land Council	Tumut, Gilmore, Argalong
Cancer Patients Foundation	Wagga Wagga
CareFlight	Snowy Monaro Regional Council – Southern Inland
Coleambally Darlington Point Junior Rugby League	Coleambally
Coleambally Townlife	Coleambally
Committee for Wagga Inc	Wagga Wagga
Coonong Wildlife Sanctuary	Urana
Corowa and District SHE Shed Inc	Corowa
Country Education Foundation of Coleambally-Darlington Point	Coleambally-Darlington Point
Do It For Batlow Inc	Batlow
Fight Cancer Foundation	Albury
Girl Guides Association (NSW)	Hay
Goulburn High School	Goulburn
Griffith Post School Options Inc	Yoogali
Hay Mardi Gras Inc	Hay
Hay Plains Landcare	Hay
Hay Shire Council	Hay
Islamic Womens Welfare Organisation	Lakemba
Life Education NSW	Wagga Wagga
Lighthouse Community Support	South West Sydney

Organisation	Location
Lower Lachlan Landcare Group Inc	Booliga, Oxley
Maronites on Mission Australia Ltd	Redfern
Men in a Shed Dareton Inc	Dareton
Nari Nari Tribal Council Ltd	Hay
Ozfish Ltd	Riverina, Murray a Southern Inland
Petaurus Education Group	Darlington Point
Rapid Relief Team Ltd	Ermington
Rotary Club of South Wagga Wagga	Wagga Wagga
St Joseph's Parents and Friends Association	Jerilderie
St Peter's Primary School	Coleambally
St Vincent de Paul Society NSW	Deniliquin
Sydney Community Connect Inc	Sydney
Technical Aid to the Disabled (TAD)	Wagga Wagga
The Infant's Home Child and Family Services	Ashfield
The New Dalton Community & District Association Inc	Dalton
The Rock and District Meals on Wheels	The Rock
Tirkandi Inaburra Cultural & Development Centre Inc	Coleambally
Tumut Art Society	Tumut
Tumut Public School	Tumut
Upper Lachlan Landcare Inc	Upper Lachlan Shire
Wagga Cycling Club	Wagga Wagga
Wentworth District Preschool Playcentre Inc	Wentworth

Program highlights included:



Bonshaw Public School

The small Bonshaw Public School near the NSW/ Queensland border has a new playground for students, after receiving a Community Partnership Program grant as part of Transgrid's QNI project. According to Principal, Hilary Dance-Wilson, the playground is a very welcome addition to the school after a tough few years.



Canterbury Community Garden

As part of our Powering Sydney's Future project this piece of land at Canterbury Boys High School will soon be a community garden. We're proud to support a project that will bring the community together and promote sustainability.



Hilda Sid Farm

As part of EnergyConnect, Transgrid provided a community grant to support Hilda Sid Farm which works with people with disabilities to explore and enjoy sensory and community gardens. The farm, which is quite a distance from Wagga Wagga, used the grant to purchase a potentially lifesaving defibrillator.



Murrumbidgee Men's Group

As part of our EnergyConnect project Transgrid provided the Murrumbidgee Men's Group with a community grant to help fund local initiatives in men's mental health support. The group provides support and mateship to help men through their difficult times.



Our people

We are committed to building a high-performance culture where everyone can reach their potential while contributing to the success of the business and the role we play in the community.

Safety

Industry best safety and environmental performance

Our year's health, safety and environmental (HSE) performance was industry-leading, with the best results since July 1998 when the organisation began to track HSE statistics. Since our 2021 disclosure, Transgrid's HSE key performance indicators have improved significantly. Our combined LTIFR has decreased by 57 per cent, from 1.8 down to 0.8. Our combined TRIFR has decreased by 62 per cent, from 7.4 down to 2.8.

In FY22, our proactive hazard reporting increased by 42 per cent, from 2,074 to 2,935, the highest ever reported in the history of Transgrid. The result demonstrates the expanding risk awareness of our people and delivery partners, and our improved culture of reporting.

During the year, Transgrid has implemented a 'Felt and Visible' Leadership program to capture the safety conversations our leaders are having with teams and delivery partners in the field. This, in combination with our new ZIP (Zero Incident Process) Leadership program, contributed to our improved safety performance.

In the coming year, we will continue ZIP training with our employees and digitise our HSE Inspection checklists and tools for assurance and reporting, to support our critical risk management framework. We will also continue to enhance our safety culture, ensuring everyone looks out for each other so we all go home safely to our family and loved ones at the end of each day.



In Transgrid's 2022 Employee Engagement survey, 91 per cent of our people said they felt Transgrid values safety and they can raise issues with their manager.

Wellbeing

Mental health

Transgrid recognises that a mentally healthy workplace benefits everyone: our people, our business and the broader community. We are committed to promoting mental wellbeing, minimising workplace risks to mental health, supporting our people experiencing mental health issues and reducing the stigma associated with mental health.

In November 2021, Transgrid received the Allan Fels Mental Health Award at the 2021 Australian HR Institute Awards. The award recognises organisations that work to improve employee understanding and awareness around the general mental health of their workforce and the wider community. The judges were impressed by Transgrid's initiatives, including:

- Thrive Platform**
 Our online and mobile wellbeing hub offers our people, including those in the field, free physical and mental health resources.
- WorkMates Program**
 A formal support structure with 90+ WorkMate volunteers now trained to confidentially respond to colleagues struggling with aspects of their mental health. The program continues to be an important first-line mental health support intervention.

Evolving to hybrid work

Hybrid working enables Transgrid to build on the skills we've developed to combine the best of working from home with the best of what working in the office brings. We remain vigilant in respect of our continuing obligations to support our people when they are working from home and in the field, and are reaping the benefits of having our people back onsite collaborating face-to-face wherever possible.

We've discovered that we can innovate, learn new technologies and collaborate regardless of where the work is performed. Video conferencing is used well for team meetings and check-ins on team members working remotely.



I'm a **WORKMATE**

Diversity and Inclusion

Our Diversity Council has worked closely with our people to support a refresh of our Diversity and Inclusion Strategy under three key pillars:

1. Attract diverse talent

2. Build an inclusive culture

3. Equity in all we do

Diversity of minds brings diversity of thought, which is central to innovation and problem-solving. Being inclusive means empowering all our people to contribute their expertise and unique perspectives for the benefit of organisational performance and achievement of outcomes.

In FY22, Transgrid continued to support Diversity and Inclusion from the top, with our CEO taking on the role of chairing our employee-led Diversity Council.

During the year, we launched an Inclusive Workplace project to better understand the lived experience of our women at Transgrid. The results of this project will inform programs of work we are undertaking in FY23.



1. Attract diverse talent

Female employees: In FY22, 50 per cent of our apprentices and 35 per cent of graduates were women. However, women make up just 26 per cent of the Transgrid workforce, 28 per cent of leadership positions and 15 per cent of trades and operations. To help address the under-representation of women, our gender strategy during the year included:

- Continuing our coaching program for women.
- Developing a scholarship and intern framework to better manage our approach and identify opportunities to hire scholarship students.
- Continuing to offer electrical engineering scholarships for women.
- Upgrading our Domestic Violence policy to provide 10 days of paid leave.

In early 2022, we held our first pre-apprenticeship program for women in collaboration with Belmont TAFE in Lake Macquarie. During the program, our 16 participants gained first-hand experience of what it's like to work in an electrical trade.

The Executive Leadership Team Delegate Program:

Earlier this year our CEO Brett Redman, announced the revitalised Executive Delegate Program in which high performing female senior leaders attend and participate in Transgrid Executive meetings on a six-month rotational basis to gain insights and experience to support their future leadership journeys.

First Nations employees: Transgrid has 24 employees who self-identify as Aboriginal or Torres Strait Islander. Initiatives to include more First Nations people in our workforce and talent pipeline, include:

- Offering electrical engineering scholarships for Aboriginal or Torres Strait Islander students through partnerships with UTS and UNSW.
- Continuing to place students through our partnership with Career Trackers.



2. Build an inclusive culture

Transgrid retains talent by ensuring all our people feel a sense of belonging, regardless of gender, cultural identity, age or sexual orientation. During the year, our efforts to strengthen our inclusive culture included a strong focus on employee networks as visible signs of inclusion. This year around 12-15 per cent of employees were involved in one or more of our networks.

Each employee network is sponsored by an Executive Leader and has an active committee and blog, and a program of work that aligns to the D&I strategy. During the year, engagement in the D&I networks was high, with network-organised events including International Women's Day, IDAHOBIT speaker event, and a Wear it Purple panel event.

FY22 was the first year Transgrid participated in the Australian Workplace Equity Index. We also launched the Rise Ally Network to support LGBTQI+ inclusion by:

- Raising awareness and promoting LGBTQI+ inclusion in the workplace.
- Promoting the use of LGBTQI+ inclusive language
- Providing learning opportunities for Allies.
- Providing a platform through which we can promote and share our experience of LGBTQI+ inclusion externally, and learn from other organisations.
- Creating a visible presence of support for LGBTQI+ people.



3. Equity in all we do

Hybrid and flexible working are great enablers of workplace equity. During the year, we formalised our approach to hybrid working and took steps to train leaders and embed this new way of working into our culture.

On International Women's Day 2022, we introduced an industry-leading parental leave policy, offering 20 weeks of leave which can be commenced within the first 12 months of birth. This is a significant change aimed at giving mums, dads and partners the flexibility to participate in primary care in the first important year of their child's life.

In 2021, we saw an equal number of men and women accessing primary care leave options. By supporting both men and women to access primary care leave options we also hope to encourage more women back into the workforce,



Lumea

“In a year full of transformation and notable disruption in the energy sector, I’m proud to report on Lumea’s progress in helping build the foundation for a stable transition to a clean energy future.”

Richard Lowe
Chief Executive Officer, Lumea



CEO’s report

In June 2022, we unveiled Lumea’s new growth strategy that sets a path for us to add 35 per cent to the Transgrid Group’s EBITDA by 2030. This strategy reflects the growing momentum to decarbonise and seize the opportunity for Australia to become a renewable energy superpower.

Aside from the success of core business activities, significant work has been done internally to further prepare Lumea to continue growing exponentially. We have expanded Lumea’s leadership team capability with a dedicated focus on major projects, asset management, and innovation and new ventures. This has been central in providing Lumea with the skills and expertise needed to support our ambitious growth agenda. This breadth reflects our growing capabilities and the scope of new products and integrated services we provide for our customers.

Lumea is focused on assisting our customers progress Australia’s new energy generation sector, including hydrogen and offshore wind.

Our expertise in innovative connections combines detailed technical knowledge with creative commercial problem-solving. It means we have helped bring more renewable energy into the grid than any other organisation, about 13GW, generating enough power for more than five million homes.

We look forward to bringing the drive, creativity, and commerciality of our approach to emerging sectors, and in so doing, accelerating the journey to decarbonisation. In the face of economic uncertainty in the 2022 financial year, the strength and integrity of the business has remained, and Lumea is now poised to expand and grow successfully and sustainably.

Lumea has been actively engaged with local communities throughout the year. We also committed to sponsor Scholarships for the Western Sydney Leadership Programme over three years, for participants from NGO’s in this region.

During the year, Lumea was appointed to build, own and operate the connection infrastructure required to connect the Sapphire Wind Farm to the National Energy Market for the life of the project.



Renewable generation projects

In FY22, Lumea continued to build new and creative pathways to reach Australia’s renewable energy objectives.

Smoothing the transition to renewables

As more renewable energy enters the grid, the power system faces new challenges, including increased capacity. During the year, Lumea collaborated with Octopus Investments and AEMO to develop a unique solution to safely increase the capacity for power flow on the transmission line that forms the backbone of the power system in South West NSW.

The Darlington Point to Wagga Wagga line, has been under increasing capacity pressure as a result of new generation projects. Now, the solution, which uses smart relays and circuit breakers, allows more energy to flow safely through the system. This important change reverses the limit on output of local power generators, while ensuring that the region remains protected from widespread disruption due to a potential outage.

Connecting NSW’s largest wind farm

Rye Park Wind Farm, which is being developed by the combined Tilt Renewables and Powering Australian Renewables (PowAR) business, will be the largest wind farm in NSW, producing enough energy to power approximately 215,000 homes per year.

During the year, Lumea was appointed to build, own and operate the connection infrastructure required to connect the wind farm to the National Energy Market for the life of the project. Rye Park is one of the first wind farms to reach financial close in 2021, and is expected to reach commercial operations in 2024, as many coal-fired stations are scheduled to close.

Innovation and business growth

The year saw Lumea make strides towards a future with greater electrification, battery energy storage and digital connectivity.

Leichhardt electric bus pilot

During the year, in a joint venture with Zenobe Energy, we continued to facilitate the penetration of electric vehicles by collaborating with Transit Systems and the NSW Government to transform the Leichardt bus depot into a next-generation electric bus depot.

Launched in October 2021, the \$40 million project, integrates 40 electric buses, chargers, solar generation, and batteries with the electric grid. Leichardt now has the largest single fleet of electric buses in Australia – with an additional 15 buses planned for delivery later this year. The Australian Renewable Energy Agency and the Clean Energy Finance Corporation provided strong support for this pilot, which will share knowledge and performance data to support the roll-out of electric buses across Australia.

Energy Scale-up Program

For the second year running, The Transgrid Group participated in the EnergyLabs Scaleup Program, where we meet and workshop with energy tech start-ups. This year, Lumea’s focus was on exploring new technologies, such as Amber Kinetic’s kinetic energy storage system.

Integrated solutions for data centres

As the energy system transition continues, integrated solutions will combine connections, energy storage and local renewable generation to deliver semi-isolated power to customer sites or precincts like data centres. During the year, Lumea began developing a pilot for a data centre solution that optimises on-site renewable energy assets.





New connections

In FY22, the Queanbeyan Battery energy storage system reached practical completion after being delivered on an accelerated schedule. Stage two of the Berrybank Solar Farm is forecasted to reach practical completion in August 2022.

Infrastructure Service projects completed or scheduled for completion FY22

12TWh p.a

Renewable energy transferred by Transgrid assets

Project	Status	MW	Practical completion
Queanbeyan Substation BESS - Connection	Completed	20 MW	FY22
Berrybank Solar Farm - Stg2	Under Construction	100 MW	FY22
Riverina Solar Farm	Under Construction	45 MW	FY23
New England Solar Farm	Under Construction	800 MW	FY23
Yanco Solar Farm - Connection	Under Construction	60 MW	FY23
Rye Park Wind Farm - Connection	Under Construction	384 MW	FY23
Avonlie Solar Farm - Connection	Under Construction	190 MW	FY23
Wollar Solar Farm - Connection	Under Construction	280 MW	FY23
Capital BESS - Connection	Under Construction	100 MW	FY24
Walla Walla Solar Farm - Connection	Under Construction	300 MW	FY23
Snowy 2.0 - Connection	Under Construction	2200 MW	FY24

Telecommunications

Lumea's Telecommunications business revenue comprises of 50 per cent data services and 50 per cent colocation revenue from some 37,000 towers. As the energy and telecommunications sectors converge, we are helping to fill out mobile black spots while also supporting the energy transition.

Extending our network

Lumea's vast fibre network is set to be extended further into Queensland, building on the existing routes through NSW, Victoria and the ACT.

The extension of reach into Queensland creates unique capabilities across the eastern seaboard. Lumea will be able to provide businesses and communities with high speed (Wavelength) connectivity services. We will also further enhance our network of data centres, which connects key data centres, such as Leading Edge Data Centres, NextDC and Equinix, to provide large organisations with their own data security and connectivity assurances.

Helping to bridge the digital divide

Lumea is working with the NSW Government and local regional councils to deliver enabling infrastructure and provide services that rival metropolitan capabilities. Lumea deployed the first high-speed fibre network in the Parkes Shire as part of NSW's first Special Activation Precinct (SAP). In FY22, Lumea was appointed as the Parkes Shire Council telecommunications partner, providing secure, scalable and high-speed Lumea Carrier Ethernet and Lumea Business Internet along Brolgan Road, where the SAP is located.

Businesses along the path will benefit from full fibre drop-off flexibility, and connectivity up to 10Gbps or higher, giving them access to speeds and performance that rival metropolitan centres. This new digital connectivity for Parkes will help accelerate the economic growth in the region and is an important step in the NSW Government's 20-Year Economic Vision for Regional NSW released in 2018.

Optimising wireless colocation services with AI digital twin technology

Lumea's Telecommunications Wireless Colo customers benefited from world-first technology led by Lumea with LeBlanc and SiteSee. Site Discovery is a digital twin platform accessible through a self-service portal that will streamline applications, inspection and maintenance activities.

The proprietary platform will enable customers to virtually scope sites in 3D, instantly deliver accurate 'As-Surveyed' information and inventory comparison reports with Unmanned Aerial Vehicle mapping. Customers will no longer need to physically inspect sites to apply or manage their equipment on leased sites, instead being able to virtually add and remove their equipment. Doing so will instantly convert to an application to colocate, saving time on both site visits and detailed desktop analysis. The first phase of the project has been delivered, allowing users to view 3D renders of their sites in real time. The full suite will be available to customers in late 2022.

The telecommunications team plays a critical role in the growth of Lumea providing telecommunications services to our renewable customers, and to the communities in which we serve.

With 37,000 towers and an extensive fibre network, we are part of the backbone that supports the regional telecommunications industry. Over the past 12 months, we have substantially increased our reach across the east coast, committed to improving regional connectivity, and continued to develop and lead best practice in security and data sovereignty.





Performance

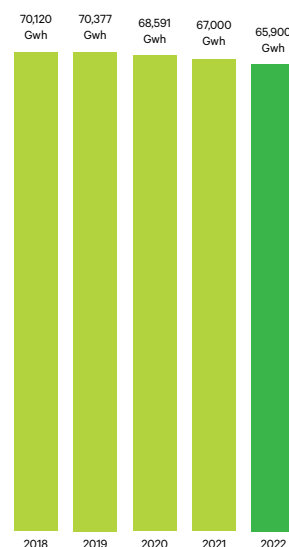
Key indicator review

Transgrid Group is committed to creating and sustaining long-term value. We delivered a strong financial performance this year, driven by revenue from our non-prescribed business, Lumea, totaling: \$140.3million

Key Financial Indicators	FY22	FY21
Prescribed revenue	805.0	784.8
Non-prescribed revenue	140.3	132.7
Total revenue	945.3	917.5
Operational revenue	(229.9)	(223.4)
Underlying EBITDA	715.4	694.2
Net Profit	104.3	4.8
Prescribed capex ¹	339.8	517.0
Non-prescribed capex	152.3	159.3
Major Projects ¹	174.1	270.6
Total Capex	666.2	946.8
Total PPE	8,718.5	8,396.9
Intangible assets, investment property and other assets	3,687.5	3,151.5
Total assets	12,406.0	11,548.5
External debt	(6,633.4)	(6,363.6)
Other liabilities	(484.5)	(843.6)
Net assets	5,288.2	4,341.2
Prescribed asset base	7,614.1	7,185.7

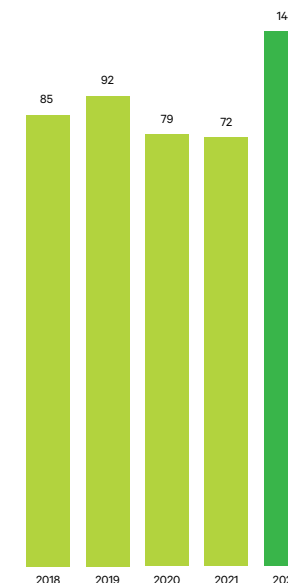
1. PSF, QNI and VNI projects have been reclassified out from major Projects capex and included within Prescribed capex. The FY21 comparative figures have been restated.

Network throughput (energy sent out)



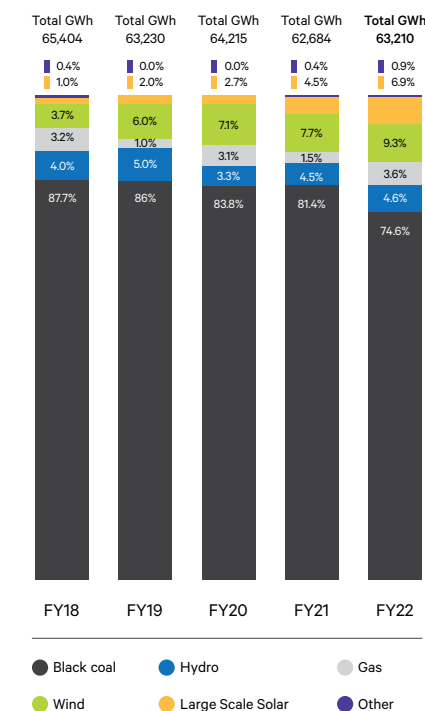
-1.7% ▼
Decrease from FY21 to FY22

Wholesale price (c/kWh)



100% ▲
Increase from FY21 to FY22 (Source: AER, AEMO)

NSW generation output





Leadership

Board of Directors

Our directors have a wealth of combined experience across the energy industry.



Jerry Maycock

Director and Chair
*Chair B.Eng Mech (1st Hons),
 FAICD, FEngNZ*

Jerry Maycock was appointed as Chair of Transgrid on 22 February 2018 and is the Acting Chair of the People and Performance Committee. He has spent more than 35 years in business leadership roles and, as a senior executive, has worked principally in the building and construction materials industries.

Having begun his career with Shell Oil in the UK and then New Zealand, he held a number of senior management positions in Australia, principally with Swiss-based construction materials multinational group Holcim Ltd over a 20-year period. Subsequently, he held several other senior management positions, the last being Managing Director and CEO of CSR Ltd.

He was formerly a director of Nuplex Ltd, Chairman of AGL Energy Ltd, Chairman of Arrium Ltd and Chairman of The Port of Brisbane. He is a director of the children's education charity The Smith Family.



Julie Stanley

Director
BComm, CA, GAICD

Julie Stanley was appointed to the Transgrid board in December 2015 as an independent director and is the Chair of the Board Audit and Risk Committee. She is a Chartered Accountant and a Graduate of the Australian Institute of Company Directors with extensive experience in finance, accounting, risk management and assurance both in Australia and internationally.

Julie is a non-executive director of RACV Limited and RACV Finance Limited and a member of the RACV Audit and Compliance Committee. Julie is also a Non-Executive Director of South East Water Corporation, and a former board member and chair of the Audit and Risk Committee of Regional Arts Victoria.

A former assurance and advisory partner of Deloitte, Julie specialised in the provision of audit and investigative accounting services to public and private companies with a focus on energy and infrastructure.



Dr Warren Mundy

Director
*FRAeS, FAICD, BSc (Hons), DipEc, MPhil PhD,
 Grad Dip App Fin, MEnvLaw (Hons)*

Dr Warren Mundy was appointed to the Transgrid Board on 16 December 2015. He has held senior executive roles in the airports industry in both Australia and Europe and has worked for McKinsey and Company, the Reserve Bank and the WA Treasury Corporation.

He retired as a Commissioner on the Australian Productivity Commission in 2015 after six years of service. He previously served on the Board of Air services Australia as Deputy Chair for over five years.

Warren currently serves on the boards of the Sydney Desalination Plant and the Queensland Competition Authority. He is the Chair of both the Regulation and Stakeholder Engagement Committee and of the trustee of the NSW Electricity Networks Assets Trust.



Stasha Prnjatovic

Director
BComm (Hons), GAICD

Stasha Prnjatovic was appointed to the Transgrid Board on 15 October 2021. She is a Director at OMERS Infrastructure, and in this role she is leading asset management efforts in the Asia-Pacific region.

Stasha brings broad infrastructure sector experience, having previously worked in the private and public markets, on asset management and transaction activities. Prior to joining OMERS, Stasha was a Principal with AMP Capital, responsible for asset management of Australian energy investments.

Prior to that, she was with NSW Treasury leading a large privatisation program of the State's electricity networks portfolio. She also spent eight years with Citigroup as a sell-side analyst covering ASX-listed infrastructure and utility companies.

BOARD OF DIRECTORS (CONTINUED)



Charles-Edouard Mariolle

Director

MBA, GAICD

Charles-Edouard Mariolle was appointed to the Transgrid board in 2019.

He is a Senior Director at Caisse de Dépôt et Placement du Québec (CDPQ). Charles-Edouard has long standing experience in energy infrastructure, project finance and corporate governance.

Prior to joining CDPQ in 2018, Charles-Edouard participated in numerous transactions in the energy sector in Europe, successively as a senior manager with Deloitte, as the founder of a renewable energy developer ultimately sold to a US-based infrastructure fund in 2011, and as deputy head of Natixis' Mirova renewable energy funds between 2011 and 2018, where he also acted as a board member for the funds' portfolio companies.

Over that period, Mirova added 3.5GW of new renewable generation across Europe and received multiple awards for its leading ESG approach and green investment strategy.



Jean-Étienne Leroux

Director

B.Com, M.Sc. Financial Engineering

Jean-Étienne Leroux was appointed to the Transgrid Board on 16 December 2015.

He has been the Managing Director of Infrastructure at Caisse de dépôt et placement du Québec (CDPQ) since 2006.

In this role, he is responsible for all infrastructure activities in Australia and New Zealand. As head of Australia and New Zealand, he also takes an active part in positioning CDPQ as a partner of choice across all asset classes, in promoting CDPQ's brand in the region and in representing the organisation in the finance and business communities, as well as with key stakeholders. Mr. Leroux is also responsible for the Sydney office, where he has been based since 2015.

He has a mandate to oversee the development and management of a portfolio of quality infrastructure holdings in Australia such as the Port of Brisbane, Plenary Group and Northwest Rail Transit (Sydney Metro) for which he is also a director.



Christopher Curtain

Director

BBus, MAppFin, GAICD

Christopher Curtain was appointed to the Transgrid Board on 17 July 2020. In his role as Senior Managing Director, Asia-Pacific at OMERS Infrastructure, he leads the APAC team based in Sydney and Singapore, and is responsible for the regional strategy and portfolio.

Prior to joining OMERS Infrastructure in 2014, Christopher spent seven years with GIC in London, leading transaction-execution teams and holding board roles for major investments in the regulated utilities, power generation, midstream energy and transportation sectors, including Oncor Electric Delivery in Dallas and Duquesne Light in Pittsburgh. Before GIC, he had eight years with PwC in Australia and the U.K., and other roles with the RBA and NAB. Christopher is the Chair of Transgrid's Safety and Sustainability Committee and is also a Director of Port of Melbourne.



Gordon Hay

Director

B.Eng (Hons), MBA

Gordon Hay was appointed to the Transgrid board on 1 July 2018.

He is an Executive Director at HRL Morrison & Co, and the Portfolio Director for the Utilities Trust of Australia.

Gordon has a broad infrastructure background, with specific expertise in energy markets and regulated utilities. His experience spans investment management, corporate governance, and corporate advisory.

Previously, Gordon led the Energy & Utilities investment team at QIC, and he served on the Board of Powerco Limited, New Zealand's largest regulated energy network. Gordon was also an Executive Director at an Australian boutique investment bank, where he was responsible for origination and execution of M&A transactions, debt financings and equity raisings across the infrastructure, energy and resources sectors.



Deion Campbell

Director

BE, Electrical Engineering, MEng, Management, GAICD

Deion Campbell was appointed to the Transgrid Board in 2022. Deion is an Operating Partner with HRL Morrison and Co, where he deploys his significant energy infrastructure project delivery and general leadership experience to help secure and manage investments in energy and related infrastructure for a variety of clients.

Prior to this role, Deion was CEO of successful renewable energy platform Tilt Renewables. As the CEO, Deion provided an entrepreneurial, energetic, growth-oriented approach to leadership, with the team at Tilt encouraged to achieve innovative outcomes across the asset lifecycle in order to optimise shareholder value. Deion has held senior executive leadership roles in publicly-listed electricity companies since 2011, including large capital investment decisions, demerging listed entities, business start-up, M&A, equity raising, investor relations, takeovers and asset divestment.

BOARD OF DIRECTORS (CONTINUED)



Jan Brand

Director

Masters in Financial Economics, Bachelor of Arts in Economics and Finance (Hons)

Jan Brand was appointed to the Transgrid Board in 2021.

Jan joined Ontario Teachers' in 2015 and is a member of its Infrastructure & Natural Resources team. He helps manage Ontario Teachers' investments across the Asia-Pacific region, including Spark Infrastructure and the Sydney Desalination Plant in Australia.

He worked on the group's acquisitions of Spark Infrastructure in 2021, Enwave Energy Corporation in 2021, the National Investment & Infrastructure Fund in 2019, and Atlantic Aqua Farms in 2017. In addition to Transgrid, Jan also sits on the board of the Sydney Desalination Plant.



Gerard Reiter

Director

B.Eng Elec (Hons), Grad Dip BA, Adv Dip Proj Management

Gerard Reiter was appointed to the Board of Transgrid in 2021.

Gerard is the Managing Director of Axcantium Pty Ltd, a boutique consulting firm specialising in providing electrical engineering and asset management advice to clients throughout Australia. He is also CEO of Aqua Aerem, proponent of the 10GW, \$15bn green hydrogen project Desert Bloom Hydrogen, based in the Northern Territory.

He has extensive experience in the national electricity market, specialising in power systems and transmission system design as well as prescribed network business activities. Gerard previously worked for Powerlink and Transgrid in executive roles for more than 10 years.



LEADERSHIP (CONTINUED)

Executive Team

Our executive team at 30 September 2022.



Brett Redman

Chief Executive Officer
BComm (Hons), CA, GAICD

Brett Redman is a highly-experienced energy industry executive at the centre of Australia's energy transition.

Prior to joining Transgrid, Brett had more than three decades of leadership experience including nearly 15 years at AGL Energy where he was appointed CEO and Managing Director in 2018.

During his tenure at AGL, Brett grew Australia's largest energy retailer, assembled Australia's largest electricity generator and founded Australia's largest renewables developer.

He is the former Chair of the Australian Energy Council. Brett is a passionate believer that corporates must build their social license as well as the bottom line to be truly successful. He is committed to working across the community to help build an energy market that is reliable, affordable and sustainable.



Brian Salter

Executive General Manager - Legal, Governance & Risk
BA (ANU), LLB (Hons) (ANU), LLM (Hons) (Syd)

Brian Salter is a highly-experienced legal executive, and has practised commercial law for over 35 years. He is a specialist in regulatory, compliance and governance issues. Before joining Transgrid in 2019, Brian was Group General Counsel and a member of the executive team at a major listed company for more than a decade. He also spent 26 years at a major first-tier law firm, including 19 years as partner.

Brian was a board member of the Australian Securitisation Forum (ASF) for 18 years and Chair for six years. In 2005, he was awarded a Distinguished Service Award by the ASF for his contributions to the Australian Securitisation Industry. Brian is the former Chair of both the General Counsel 100 and SCECGS Redlands. He was a long-time member of the Legal Committee of the Australian Institute of Company Directors (AICD) and the Corporations Committee of the Business Law Section of the Law Council of Australia.



Craig Stallan

Executive General Manager - Delivery
BEng (Hons), GAICD

Craig Stallan brings to Transgrid more than 25 years of experience in heavy industry including mining, manufacturing, and oil and gas, working in the United Kingdom, United States and Australia.

Craig is responsible for the safe development and delivery of Transgrid's maintenance and capital programs.

Prior to joining Transgrid, Craig held senior executive roles in commercial, operations and major projects, leading large and complex divisions in the oil and gas, and energy infrastructure industries.



Marie Jordan

Executive General Manager - Network
BEng (Hons), GAICD

Marie Jordan has more than 35 years of gas and electric transmission and distribution operations experience. She serves as a Board director for Duquesne Light Company.

Marie was President and CEO of Peak Reliability in Vancouver, WA, which provided reliability coordination for transmission companies in the Western US as well as Baja California, Mexico and British Columbia, Canada.

Prior to joining Peak Reliability, Marie was at National Grid, where she held a variety of positions including SVP of Network Strategy and SVP of Gas Construction and Operations. Marie started her career with Pacific Gas & Electric Company in San Francisco where she acquired an extensive knowledge of the regulatory environment and stakeholder engagement. Marie has a passion for the mission of the American Red Cross and acted as a board member with the Red Cross in Massachusetts and was a member of the Red Cross Tiffany Circle.

EXECUTIVE TEAM (CONTINUED)



Nadine Lennie

Chief Financial Officer
B.Actuarial Science

Nadine Lennie has over 25 years' experience as a CFO, investment manager and financial adviser. She has extensive knowledge across various infrastructure sectors as well as funds management, IT and project finance.

She has both Australian and international experience in a range of environments, including regulated markets.

Most recently Nadine was CFO at Atlas Arteria, a global owner, operator and developer of toll roads. Prior to Atlas Arteria, she was CFO at the Afterpay Touch Group, overseeing the successful merger between Touchcorp Ltd and Afterpay Holdings Ltd, and she was the CFO at Australian Pacific Airports Corporation.



Gordon Taylor

Executive General Manager - Major Projects
B.Sc. Elec. Eng., B.Comm, GAICD

Gordon Taylor is an experienced industry leader, having held executive management roles at Thiess Construction, Ergon Energy, Macquarie Infrastructure and Real Assets (MIRA) and Ventia Infrastructure Services.

Starting his career as a transmission network planner, Gordon has extensive experience in infrastructure design and construction, energy regulatory processes and utility operations and maintenance.

Gordon has bid for and delivered more than \$25 billion of projects in roads, rail, civil and utilities, including some of the largest PPP projects in South Africa and Australia. These projects include the Victorian Desalination Project (\$3.5 billion) and the Suburban Roads Upgrade project (\$2 billion). He has also delivered environmentally sensitive and live infrastructure work within communities across Australia, New Zealand and New Caledonia.



Maryanne Graham

Executive General Manager - Corporate & Regulatory Affairs
B. Communications, MAICD

Maryanne Graham has held senior executive roles in both the private and public sector for more than 20 years. Her experience includes strategy development, government and stakeholder relations, media and marketing, customer experience and corporate affairs delivery for some of Australia's most high profile organisations and infrastructure projects. These include; Sydney Water, Western Sydney International Airport, Gold Coast Light Rail, WestConnex, NorthConnex and Walsh Bay Urban Renewal development.

Maryanne's experience also includes strategic and operational leadership of large, highly diverse ASX-listed companies, including leading the corporate affairs, investor relations, government relations and stakeholder engagement portfolios for Transfield Services and Downer Group.



Jane Sherlock

Executive General Manager - People, Culture & Safety
B. Business Management

Jane Sherlock is an experienced senior executive committed to enabling organisations and individuals to achieve their potential, ensuring that organisational strategies are connected to, and deliver commercial outcomes. Jane has successfully led the strategy, implementation and operational delivery of large scale transformations and cultural change programs. Her leadership experience includes listed and multinational companies and spans industries from energy, construction and infrastructure, to technology, finance and education.

Her portfolio responsibilities have included people, human resources, industrial relations, health, safety and environment, information technology, corporate affairs and communications, Indigenous strategy and community, and social procurement and inclusion.



Richard Lowe

Chief Executive Officer - Lumea
LLB, GAICD

Richard Lowe has more than 25 years' experience in the infrastructure sector in Australia and internationally with senior management and executive and non executive director roles across listed and unlisted markets.

Richard is CEO of Lumea, Transgrid's commercial services and market facing business including new connections and network expansion, energy services and telecommunications and commercialising new technology initiatives.



Find out more at:

Telephone: 1800 222 537

Email: community@Transgrid.com.au

www.Transgrid.com.au

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