



# Annual Review FY21

People. Power. Possibilities.

# Leading the transition to a **clean energy future**

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# FY21 highlights

## Network Reliability

 **99.9999%**

## Gigawatt hours

**67,000GWH**  
of electricity moved

**11,000MW**   
of renewable energy projects in operation  
or under construction


## Renewable energy connected supplies

**4million**  
households

## Regulated Asset Base across ACT and NSW

**\$7.2billion**

## A safer place to work

**1.9**   
employee lost time injury  
frequency rate

## Data Services business grew

**24%**  
year on year

## Prescribed capital expenditure invested in the network

**\$199.8m**

## Major Projects:

**\$587.7m**  
investment

## Revenue

**\$917.5m**

**13,204km**  
Transmission lines and cables

## Females in our graduate program

**50%** 





“Transgrid’s vision is for a clean energy future that benefits communities, the economy and the environment. This vision is centred on a decarbonised economy supported by a resilient and affordable energy system.”

**Jerry Maycock**  
Chairman

# Chairman’s message

In another year affected by unprecedented climate events and ongoing disruption from the pandemic, Transgrid continued to play its central role of delivering electricity reliably and safely to Australian consumers and businesses. We have also had another year of making good progress on critical future grid infrastructure projects and assisting the transition to renewable generation.

## Vision for the future

As the world responds to climate change, Transgrid believes the transition from a fossil fuel to a renewable energy based power system is unstoppable. During the transition, Australia’s patterns of electricity supply and demand will change dramatically. Transgrid is working with the Australian Energy Market Operator (AEMO) and other transmission network service providers to plan and prepare for this future energy landscape.

As we work to lead the transition to a clean energy future, we know transmission will be central to Australia’s successful energy transformation. The year saw Transgrid undertaking scenario modelling to ensure we make the right transmission decisions now to prepare the grid for the opportunities and challenges ahead. Our modelling makes it clear that decarbonisation, electrification and new green industries will require a significant expansion of renewable generation and associated transmission infrastructure. To help guide our path, we need a clear vision for the future, for Australia and our energy system that we can collectively strive towards.

Transgrid’s vision is for a clean energy future that benefits communities, the economy and the environment. This vision is centred on a decarbonised economy supported by a resilient and affordable energy system.

## Building the new grid

In the year, Transgrid secured regulatory approval for EnergyConnect, the new interconnector between NSW and South Australia and one of the largest transmission projects to be planned for a generation. We also continued to invest in and deliver interconnector upgrades between NSW and Queensland and NSW and Victoria, and the Powering Sydney’s Future project. Big strides were made in planning for HumeLink in southern NSW and Australia’s first coordinated renewable energy zone in the Central West Orana region of NSW.

The year also saw Transgrid’s innovation program bearing fruit, including the first large-scale grid battery, currently under construction at a Transgrid substation in western Sydney and plans for Australia’s first commercially funded battery at the Deer Park energy hub in Victoria.

On 31 July 2021, one of the architects of these innovations, CEO Paul Italiano, stood down from his role after five years of tenure. Paul transitioned the business from public to private ownership at a time of unprecedented external change. The Board thanks him for his leadership during a transformative time for the business and is grateful for the contribution Paul has made to Transgrid and more broadly to Australia’s energy system.

We also farewelled CFO, Jason Conroy, and Executive General Manager Major Projects, Sean McGoldrick. Both Jason and Sean contributed greatly to Transgrid during their period with the company, leading the Finance and Regulatory and Major Projects teams through a significant period of growth and transformation for our business.

On behalf of the Board, I would like to thank Acting CEO Brian Salter, our management team and everyone at Transgrid for their dedication during a turbulent year. Your hard work and vision gives us great optimism for the year ahead.

# CEO's report

As Transgrid leads the transition to Australia's clean energy future, we are working closely with our customers and communities.

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 and maintaining the continuity of the supply of electricity. I'm proud of every employee who helped to safely and reliably sustain power to consumers, businesses and essential service providers under difficult conditions.

The year was also distinctly future-looking. We launched the new Lumea brand to drive innovation and the next-generation of essential infrastructure services, developed a clear vision for the future of the grid (see the Chairman's message), invested in new technologies and made progress in our pipeline of new transmission projects.

## Transgrid is accelerating renewables by building modern transmission infrastructure

Over the next 5-10 years, Transgrid has the opportunity to invest more than \$11 billion to build new transmission infrastructure so the network can cope with the shift to large-scale, low cost renewable energy, creating 7,000 jobs in regional NSW and \$25 billion in economic activity. It's a significant time for the business as we play our role in making a better power system for Australia.

In the year, Transgrid's interconnection projects continued at pace, providing new pathways for energy to be transferred between the states – an essential capability in a renewable-powered grid. These modern transmission projects, which sit within AEMO's Integrated System Plan, will greatly increase the resiliency of the National Energy Market (NEM) as more diverse generation sources come online. Key progress during the year included:

- **EnergyConnect** – In May 2021, we confirmed Transgrid will invest \$1.834 billion to deliver the NSW section of EnergyConnect from Wagga Wagga in the State's south to the South Australian border. This transformational energy project will save NSW customers \$180 million a year, or \$64 annually on an average household bill. It will also help to abate an estimated one million tonnes of carbon emissions each year, contributing significantly to meeting Australia's climate change targets. The project will also contribute a further \$4 billion in economic activity for NSW, including creating 1,500 construction jobs in regional NSW.
- **Queensland-NSW Interconnector (QNI) upgrade** – By year end, QNI, which will support reliable, lower cost energy sharing between the states, was 80% complete, with works now moving from the civil to the electrical phase.
- **Victoria-NSW Interconnector (VNI) upgrade** – After regulatory approval cleared the path for VNI, this project – which will increase transfer capacity into NSW from Victoria by 170 megawatts – ended the year more than 55% complete. It remains on track for completion by the end of 2022.

Construction began in August 2020 on a critical project to increase electricity security for Sydney. By year end, despite the challenges of COVID-19, 100% of the conduit installation in our **Powering Sydney's Future** project was complete. We remain on track to complete this project on schedule.

We also progressed to the next step of the regulatory process for the major HumeLink transmission project. HumeLink is a once-in-a-generation investment in Australia's energy future. Not since the development of the New South Wales transmission network in the 1950s has a project of this scale been proposed.

This project is about future-proofing the transmission network. HumeLink will reinforce the backbone of the east coast's transmission network, delivering a cheaper, more reliable and more sustainable grid. When complete, HumeLink will increase the amount of renewable energy that can be delivered to consumers across the NEM, helping to facilitate the transition to a low carbon future. Importantly, the investment in HumeLink will unlock the full potential of the Snowy 2.0 project.

During the year, when we heard that landowners and the communities in the HumeLink corridor were not satisfied with the engagement for the project, we asked our Landowner Advocate, Rod Stowe, to review our community engagement. Rod's report made 20 recommendations, including establishing independent Community Consultative Groups, which we are implementing on this and all similar future projects.

Going forward, we will work hard to do better in listening and working respectfully, effectively and transparently with communities as we plan these essential transmission projects.

## Launching the Lumea brand

May 2021 saw the launch of a distinct new brand, Lumea. This represents the successful Transgrid Services business and all other non-regulated commercial activities. Developing a new market-facing brand was a natural progression for Transgrid. The energy industry is undergoing rapid and fundamental changes and Lumea reflects our commitment to providing the solutions required to effect that transition.

Lumea is at the forefront of providing grid services for renewable energy projects in NSW and across the entire NEM. Lumea will continue to expand into markets outside of Transgrid's traditional NSW base but also into up and downstream energy services, such as energy storage, telecommunications and data, energy management systems and transportation.

Lumea is already involved in services for 11,000MW of renewable energy projects that are either currently operating or under construction. The team is also managing the progress of the grid scale battery at Wallgrove, which is testing synthetic inertia and is preparing to develop Australia's first privately funded grid scale battery situated at the Deer Park Energy Hub in metropolitan Melbourne. Lumea's CEO, Richard Lowe, explains more about the new brand on page 34.

“In the coming year, Transgrid will continue to support Australia's transition to a future energy landscape, helping to ensure our network is robust, resilient and flexible to future challenges and opportunities.”

**Brian Salter**  
Acting CEO

## Making progress on our reconciliation journey

The ongoing delivery of our Reconciliation Action Plan has been wonderful to witness. From the Dharug Elders launching our NAIDOC Week celebrations, to the in-house Indigenous artwork created for our Goods Line hoardings and the rollout of our cultural learning program – Transgrid has made progress in better understanding the culture and importance of First Nations peoples. According to Reconciliation Australia's survey, our employees agree. More than three-quarters of those surveyed said they see clear leadership towards reconciliation from the business.

## Ready for transition to a clean energy future

Our transmission plan will support energy transformation by strengthening, expanding and enhancing the network, increasing system stability and underpinning competition within the wholesale electricity market to drive down prices for consumers. The result will be an affordable, secure and low-emissions energy system that meets the economic, social and environmental expectations of consumers and communities.



# Our role

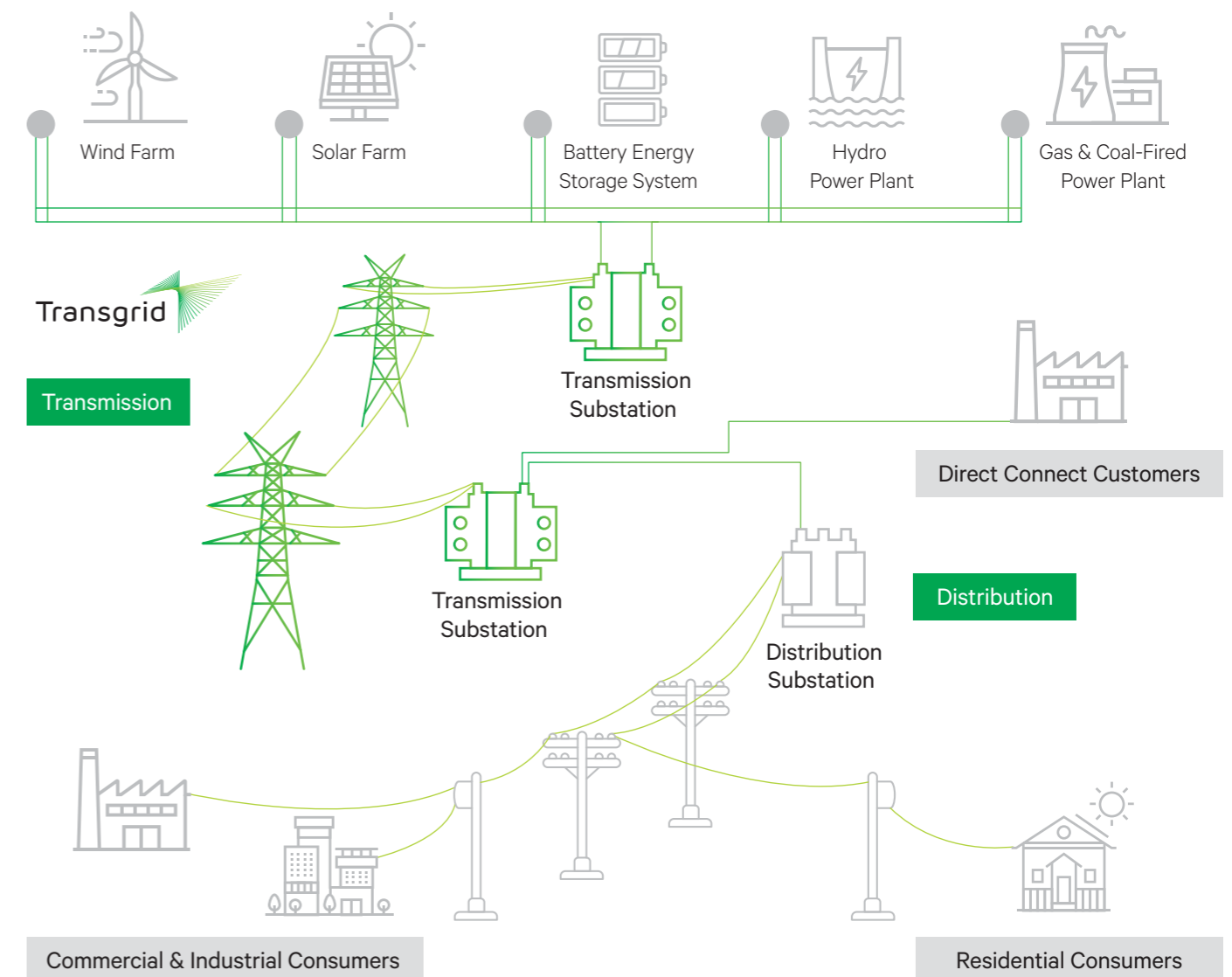
## Who we are

Transgrid operates and manages the high voltage electricity transmission network in NSW and the ACT. We offer a range of infrastructure and telecommunications services to meet the growing needs and expectations of our customers. Our network connects NSW to Queensland and Victoria, and forms the backbone of the National Energy Market (NEM).

Our network transports electricity from generation sources such as wind, solar, hydro, gas and coal power plants to large directly connected industrial customers and the distribution networks that deliver it to homes and businesses. Comprising 119 substations, over 13,204 kilometres of transmission lines and cables and five interconnections to Queensland and Victoria, the network is instrumental to the electricity system and economy, and facilitates energy trading between Australia's largest states. The NEM is currently undergoing a period of transition as the generation mix changes to include more renewables and storage technology, allowing greater participation from customers in the energy market. We are working with our customers, stakeholders across the energy supply chain and decision-making bodies to ensure we make a better power system for Australians.



## Transgrid within the electricity supply chain



# Strategy

## Leading the transition to a clean energy future

In 2021, Transgrid launched its Corporate Strategy including its vision and purpose.

Our Strategy outlines how Transgrid is responding to changes in our operating environment, including:

- Consumers remaining at the forefront of the energy debate, with a focus on industry-wide efficiencies to improve end-user outcomes.
- The energy system evolving to a renewables-based power system. Major transmission projects are needed to support the future grid and new generation needs to connect into the grid.

- Disruptive technologies and market changes creating opportunities for new energy services, new business models and improving the way we operate.
- The regulatory and political environment changing rapidly as the energy sector transforms.

Transgrid is in a unique position to **Lead the energy transition**, building on our purpose of **Making a better power system for Australians**.

Underpinning this is are three strategic pillars for Transgrid.

- 1. Advocate for the energy system of the future.** Deploy our engineering, regulatory and policy expertise to advocate for a sustainable energy future.
- 2. Deliver safe, reliable and low cost power.** Maintain high standards of system reliability as the system transitions, for the benefits of consumers, while in turn ensuring safety is paramount for our workforce and the public.
- 3. Invest in new infrastructure and services to support the transition.** Pursue new transmission projects, including interconnectors and renewable energy zones and capitalise on new growth opportunities that align with our competitive advantage.

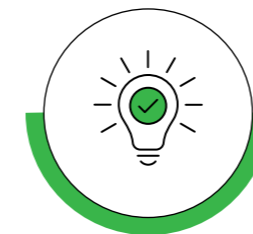


**Vision**  
Lead the transition to a clean energy future

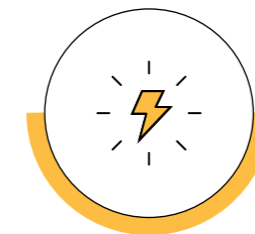


**Purpose**  
Making a better power system for Australians

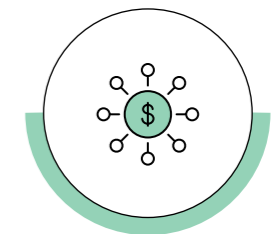
## Strategic pillars



Advocate for the energy system of the future



Deliver safe, reliable and low-cost power



Invest in new infrastructure and services to support the transition

## Strategic focus areas



**Secure and deliver** our Major Projects



Move to the organisational culture and **capability of the future**



**Grow and expand** our unregulated business



**Become a thought leader** in policy and customer issues



**Launch new business** lines and pilot innovations



# Safety

## Health and safety is first priority

At Transgrid, the safety and welfare of our people and the broader community is our highest priority. In FY21, we continued to focus on strategic injury prevention, health and safety risk management during the unprecedented COVID-19 crisis.

### Embedding HSE resources deeper in the business

In December 2020, we restructured our Health Safety and Environment (HSE) team to align it with the Three Lines of Defence assurance model. HSE Business Partners and Environmental Business Partners were embedded within functional streams, providing dedicated first line coaching, assurance and support for leadership. The change allowed for dedicated and visible advisory services at the frontline, while delineating second line HSE specialists to deliver HSE system services and second line assurance to the business and act as super coaches. During the year, our HSE specialists worked hard to deliver advice, alignment and challenge on HSE ethos, leadership, culture and strategy for Transgrid and its delivery partners.

### Building our safety culture

The year also saw a significant improvement in safety culture on the back of a dedicated and consistent campaign centred on positive reporting, hazard management and leadership-led safety.

During the year, senior and frontline leaders participated in practical training, with 87% completion of our 'Heads Up - Felt & Visible Leadership' program. Sixty senior and frontline leaders also completed our new Zero Incident Process transformational safety leadership training, with a focus on the psychology of risk and growing our safety leadership competency.

To measure leadership-led safety, we introduced a Heads Up Dashboard. The dashboard overlays leadership wellness and safety interactions with incidents to identify positive results and any gaps in safety culture. We also rolled out a 'Heads Up' safety app for use in field HSE interactions and engagements, enabling people to record positive safety observations on their mobile device.

During the year, our Hazard Identification initiative, 'Look High, Look Wide, Look Low', included reward and recognition for hazard reporting, and training and guidance on how to report and manage hazards and risks, generating significant improvements in our hazard reporting culture.

Notably, our primary leading indicator metric, hazard reporting, increased by 750%. We went from 2 hazards being reported each month to 600 because people had confidence that what they reported would get fixed. Each hazard report gave us invaluable data to inform better risk mitigation, system improvement and innovation.

We also introduced 'Golden Hour Injury Management' intervention, teaching our people to assess, triage and implement early interventions to improve physical and emotional outcomes in the crucial 60 minutes after injury.

Other initiatives included introducing a Critical Risk Management Framework, with robust processes to ensure critical risks are controlled before work begins. We also introduced a Stop Work authorisation card, empowering our people to stop unsafe work.

### Tracking our safety metrics

Lost time and medical treatment injuries are Transgrid lag indicators, which we report as a combined metric that covers both Transgrid employees and our contractors, who are a critical extension of our business. In FY21, Transgrid's lost time injury frequency rate (LTIFR) was 1.9 and the total recordable incidents frequency rate (TRIFR) was 7.4.



### Health and wellbeing are first response to global pandemic

During the year, Transgrid's HSE response to the global pandemic was ahead of the curve in leadership, proactive control, business continuity and above all else – health and wellbeing. Our people were safe, informed and able to continue working securely during the pandemic.

# Safety

## Responding to the pandemic

Head of Health, Safety and Environment, Krista-Lee Fogarty, talks about Transgrid’s swift and impressive response to an unprecedented health and safety situation.

### When did you first start preparing for the COVID-19 pandemic?

In December 2019, when an eagle-eyed Warehouse Operations Lead suggested refreshing the ingredients in our pandemic kits, which were out of date. No one had heard of COVID at this stage but, because of his actions, we were ahead of the supply issues that plagued many other large organisations, with enough PPE and hand sanitiser to meet our needs.

### How quickly did you respond to the new health and safety challenges?

We stood up a cross-functional two tier Crisis Response Team in February 2020 and by March we had an Infection Control Risk Assessment protocol communicated across the business and in action – well ahead of WorkSafe and also public health advice. The protocol became the backbone of our success in staying safe and productive. It still is.

It was a huge body of work. Transgrid is used to safety protocols. We understand how to safely work with electricity or work at heights. But this was a new hazard no one had dealt with before. We had to educate a disparate workforce, including contractors, about infection controls – calmly and confidently. People were being bombarded by disinformation from social media and there was a lot of panic in the community. It was a true test of leadership, requiring strong collaboration from across the business and a willingness to be brave and back ourselves.

### What new issues arose as the pandemic stretched on?

Our next move was to develop an assurance plan, so we could check the infection control rules were being applied and understood, and our new safety behaviours were translating correctly in the field.

Then, the second wave of the pandemic hit. This one was mental health and anxiety – arguably the more important wave and certainly the one that will be with us the longest. Again, we saw great leadership collaboration to make sure we had people’s wellbeing front of mind.

Then, just before year end, Delta arrived, with a plethora of fast-changing public health orders that required us to rapidly stand up new capabilities, such as rapid antigen testing. Yet again, the HSE team and leaders moved mountains to keep everyone safe and productive.

### What were the results? What are you most proud of?

Despite our multi-site footprint and transient workforce, at no point in the first 18 months of the pandemic did we have any cases of COVID-19 in the company – nor did we have any sites shut down because of a case. That was the result of taking big decisions quickly and bravely.

But what really blew me away was that we didn’t just respond to the pandemic, we also continued to meet and exceed all the milestones in our FY22 HSE strategy and took safety to new heights. To get us through the pandemic, the HSE team – and many others within the business – essentially did a day job on top of a day job. I couldn’t be more proud of them.

### What new ways of working will Transgrid continue to benefit from in the years ahead?

Other than a flexible work from home capability, and exceptional infection control protocols, our response to the pandemic has reinforced the vital importance of mental health and wellness. This is now embedded at the leadership level and throughout the business.

We also made great progress on psychological safety. When we were communicating about the pandemic, we had to make it safe for everyone to speak up with their concerns. It was a year when the most important leadership capability was the ability to listen with empathy to people whose opinions we didn’t necessarily share. That quality will stick with us forever.



“Our response to the pandemic has reinforced the vital importance of mental health and wellness. This is now embedded at the leadership level and throughout the business.”

**Krista-Lee Fogarty**  
Head of HSE

# Safety

## Bushfire safety

Every year, Transgrid carries out aerial inspections as part of our comprehensive maintenance program to ensure the transmission network is safe for the community and our staff. The patrols help identify potential bushfire risks and assess the condition of towers and transmission lines.

## Helicopter inspections

In May 2021, Transgrid began helicopter inspections of high voltage electricity transmission lines as part of our annual bushfire safety program.

Over the three months to the end of July, the helicopter spent 279 hours in the air as a specialist team inspected more than 13,000 kilometres of transmission lines and infrastructure on Transgrid's network across NSW and the ACT.

The helicopter flies along transmission lines to help us identify potential bushfire risks, so we can make repairs before they become a problem. The patrols also help to assess the condition of towers and transmission lines and identify where trees or vegetation may be growing close to lines.

Among the issues identified were plenty of birds' nests found on equipment or towers.

Transgrid's own 'bird' in the sky attracted plenty of attention this year with widespread proactive media coverage in many regional areas to let residents and landowners know about the patrols.

The patrols are carried out each year and are a key part of our comprehensive maintenance program to ensure the transmission network is safe for the community and our staff.



# Affordable

## Improving customer outcomes

Customers continue to be at the centre of Transgrid’s vision as we work towards the transition to a renewable energy future. We understand that our support, and confidence in our network, enable our customers to diversify and grow their businesses.

### Improving energy affordability through innovation and advocacy

We know energy affordability is a priority for customers and are committed to delivering electricity at the lowest possible cost. During the year, we continued to work to improve the affordability of electricity by progressing transmission projects that will help to reduce prices for customers by improving competition within the wholesale market, supporting the connection of more low-cost generation and reducing congestion on the network. We also provided relief to customers impacted by COVID-19 by waiving the transmission charge of bills through the Energy Networks Australia relief package.

In FY21, we continued to advocate for better customer outcomes through regulatory platforms. This included working on a rule change that aimed to relieve inefficient cost burdens on generators regarding system security, which will ultimately flow through to customer bills. We also continued to explore non-network options, such as demand management and batteries, to defer the need for network investment, including using new Smart-Wires technology on the upgrade of the Victoria-NSW interconnector.

While we are making progress in improving energy affordability, we recognise this is an area where a continual focus on improvement is essential. We are investigating ways to measure the outcomes and benefits of our investments to ensure they continue to provide value to energy customers.

### Supporting our generation customers as we transition towards a renewables future

Our customers include all stakeholders who rely on a secure and reliable transmission network, including major load customers, other network service providers and our renewable generation customers, who are exploring hydro, solar, wind and the increasing use of battery energy storage systems.

During the year, we increased the level of flexibility in how we maintain and operate the network to accommodate our wide range of customers. For example, we were able to work with one of our solar farm operators to undertake essential work at night (see page 20). This solution ultimately benefited end user consumers by dramatically reducing the financial impact on the customer.

### Connecting with our stakeholders

The Transgrid Advisory Council (TAC) is Transgrid’s principal stakeholder engagement forum. The TAC advises on strategic policy topics, ensuring decisions take into account customer perspectives. In FY21, the TAC was appointed as Transgrid’s primary consultation vehicle for the 2023-28 Revenue Reset. Through TAC meetings we also gained important insights that have informed our thinking on the delivery of major transmission projects and identified key areas to improve the way we work with customers and stakeholders.

### A proud supporter of the Energy Charter

*We are a proud signatory to the Energy Charter, working alongside other signatories to drive cultural change throughout the industry. Our workforce is committed to deliver continual service improvement and add value for customers.*

In September 2020, we delivered our second Energy Charter disclosure, reporting on how our businesses was working to meet the Energy Charter’s five principles. In our third year as a signatory, we have been focussing on improving the ways in which we work with landowners and communities to deliver our major projects. As part of this focus, we have partnered with farming and landowner organisations in an Energy Charter #BetterTogether initiative to develop a Better Practice Landholder and Community Engagement Guide to continue to improve the processes by which transmission networks and landowners can work together in the delivery of transmission projects.

As we prepare to lodge our FY21 disclosure, we are continuing to work to improve the service we provide to all energy consumers. We look forward to reporting on our progress against these areas in September 2021.

Reputation score ▼ **77%**    Trust score ▲ **75%**

# Reliable

## Sustainable asset management

The transmission network is the backbone of the power system. It provides the capacity to transport large volumes of electricity cost-efficiently at high voltages from large generators to regions where it is used.

### Delivering value to customers

Network reliability depends on Transgrid effectively managing, maintaining and replacing assets along 13,204 kilometres of transmission lines and cables. In FY21, we continued to manage our assets sustainably and responsibly, delivering ongoing value to energy customers and Transgrid's shareholders. We efficiently maintained the network and achieved 99.9999% reliability with three outages with 0.04 system minutes lost. Importantly, zero fires were started from network assets.

During the year, the strength of our asset management system was recognised by an external independent review. We developed a whole-of-network risk index and continued to deliver our \$167.4 million asset replacement program, improving core elements and capability to meet the safety, bushfire and reliability expectations of customers. We delivered 20% of our long term program to repair significant damage from the extreme 2019/20 bushfires.

We continue to ensure the long-term resilience of our assets by continuously reviewing the latest data on climate change. In FY21, we completed network resilience studies using CSIRO and Electricity Sector Climate Information project data to assess long-term bushfire, temperature and severe weather events and adjust strategies accordingly.

In November 2020, our Asset Management System was successfully re-certified to the internationally accepted ISO 55001 standard.

### Innovating asset management

During the year, we had a major focus on our consequence of failure models for all asset types. These form a significant input to our risk management and investment frameworks. Our bushfire consequence model builds on industry accepted tools and advanced analytical techniques to model fire starts across varying weather conditions for every asset location and the economic and safety impact on the community. This is used to prioritise maintenance response and investment decisions.

We also enhanced our public safety model to use mobile phone human movement data to quantify the duration of exposure of people in the vicinity of our assets. We continue to improve our reliability models to better understand the 'what if?' reliability impacts to consumers for each asset failure.

### Asset management programs completed in FY21

- Line 993 Rebuild (including Optical Ground Wire)
- Marulan secondary systems renewal
- Wood pole replacement programme lines 9U3, 9UH and 99D
- Dapto asset replacements
- Lower Tumut primary asset replacements
- Armidale 330kV No.2 Rx renewal
- Sydney West dynamic voltage support refurbishment
- Secondary systems replacements at Tumut 3 power station
- Asset monitoring centre upgrade
- Broken Hill 22kV earth fault protection upgrade
- Strengthening operational technology cyber security

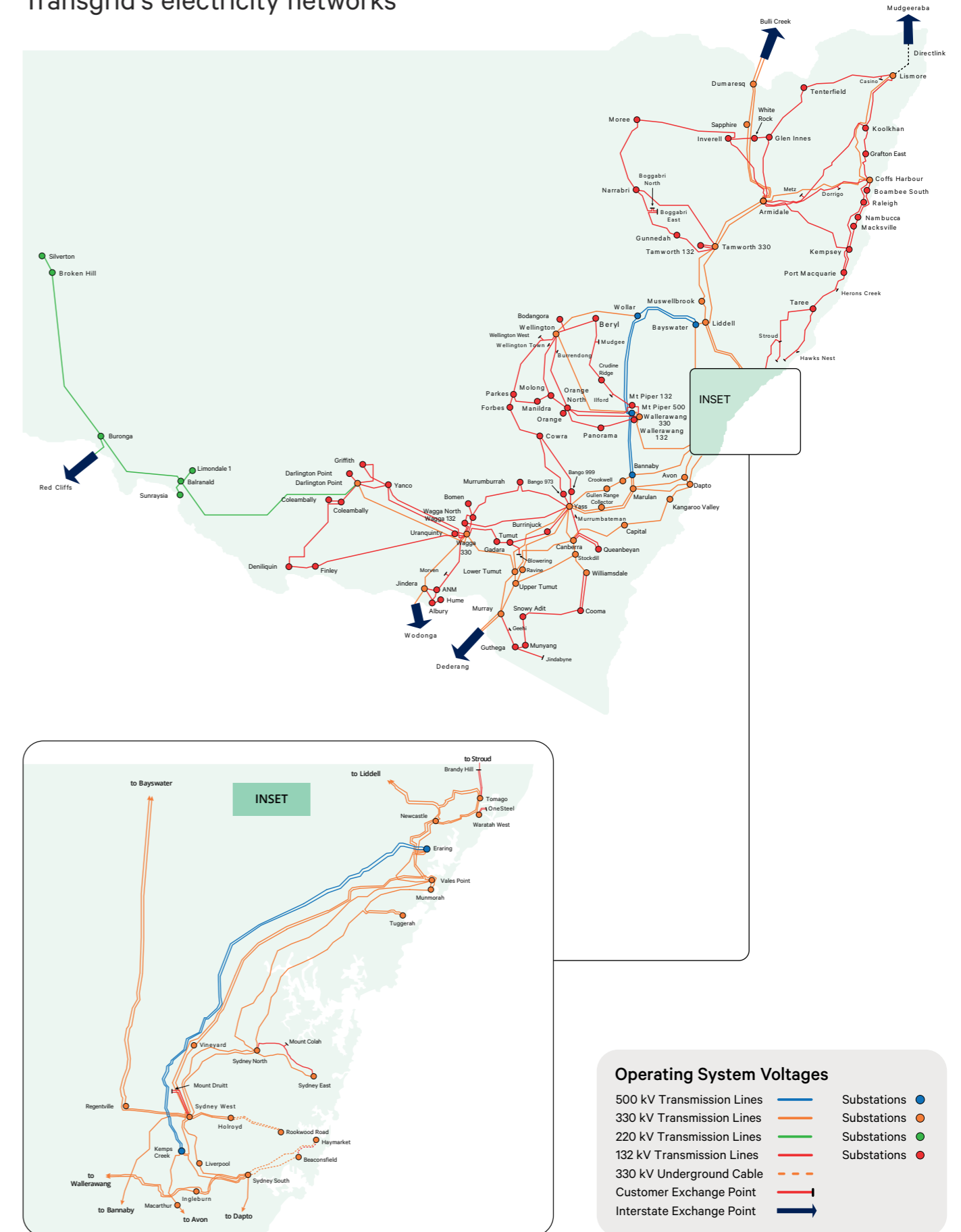
### Night works keep solar farm running

During the year, our crews replaced more than 100 wooden poles with concrete structures along 170km of Line 99A south of Wagga Wagga. Concrete poles offer less risk of line failure and cause fewer problems during backburning.

Because the work affected a nearby solar farm, the crews decided to do the replacements as night work, switching the line out when the sun went down and back in before the sun came up. As a result, the solar farm could generate at their peak output during the day, with no negative impact on their connection to the network.



## Transgrid's electricity networks



# Sustainable

## Expanded approach

In FY21, Transgrid made significant progress with our Environmental, Social and Governance (ESG) agenda, developing an ESG program to support our vision to lead the transition to a clean energy future.

### Agreeing ESG priorities

Building on the 2020 independent ESG Materiality Assessment and Board approved ESG Goals, Transgrid's Executive this year agreed key performance indicators and targets for priority focus areas aligned to the UN Sustainable Development Goals. A newly appointed Sustainability Team is now supporting the program of activities to drive performance and deliver against targets.

### A maturing climate strategy

We continued to develop Transgrid's first network climate change adaptation strategy, including reviewing our emissions reduction pathway. We also assessed physical and transitional climate-change risks and opportunities, including battery projects and electrification of industry and transport.

### Our performance recognised

A Global Real Estate Sustainability Benchmark (GRESB) 5 star rating and score of 97/100, places Transgrid in the top 10% of infrastructure assets around the globe.

### Assessing the environmental impact of our projects

In FY21, we continued to ensure the environment was considered at the beginning of and throughout every construction or maintenance project, engaging constructively and transparently with the communities in and around our projects. Site and route selection were guided by environmental, property, community, economic, technical and regulatory considerations. We also identified environmental and social values during the environmental impact assessment stage of each project, and embedded any avoidance, mitigation and management measures into our project design, construction, operation, and maintenance methods and procedures.

Sustainability Goals	Sustainability Priorities	UN Sustainable Development Goals
<p><b>1</b> Be a leader in the energy transition</p>	<ul style="list-style-type: none"> <li>Advocate for the transition to a clean energy future</li> <li>Reduce Transgrid's environmental impact</li> </ul>	
<p><b>2</b> Work closely with our customers and communities</p>	<ul style="list-style-type: none"> <li>Listen to our customers</li> <li>Strengthen community partnership program to support community initiatives</li> <li>Invest in local community development</li> </ul>	
<p><b>3</b> Be a trusted and ethical organisation</p>	<ul style="list-style-type: none"> <li>Operate with integrity</li> <li>Be transparent, including in external reporting</li> <li>Be known as a trusted and highly regarded organisation</li> </ul>	





# Sustainable

## Sustainable advantage

Protecting the environment is important for business success and is a key consideration in everything Transgrid does.

### Supporting conservation

As we construct and maintain transmission lines and cable routes, we take all reasonable steps to protect the natural habitat of the many endangered species and areas that may hold cultural significance to First Nations peoples. In FY21, our numerous conservation initiatives included:

- Collaborating with National Parks and Wildlife to protect important habitats for the Endangered Northern Corroboree frog
- Collaborating with the Department of Primary Industries (Fisheries) to develop the first utility Code of Practice for waterway crossing management to protect key fish habitats.
- Increasing the awareness of field staff and delivery partners about the need to protect endangered species and areas of cultural significance.

In the coming year, we will continue to build stronger relationships with key ecological and heritage regulators and stakeholders to improve how we manage these important issues.



As part of a Local Council environmental grant, we donated 24 poles to the Wagga Wagga City Council and, with the assistance of Origin Energy and JRC Electrical, were able to create potential habitat for the endangered squirrel glider. Thank you, to the local school for their artistic additions!

During the year, we assessed the impact of our major augmentation projects on biodiversity and worked with regulators to identify appropriate offsets, including identifying and securing properties to establish long-term biodiversity stewardship sites.



To help protect the threatened Northern Corroboree frog (*Pseudophryne pengilleyi*), we are supporting the repair and protection of its essential habitat on our easements.

### Preserving landscapes

As part of the NSW Government 'Saving our Species' program, in FY21 we supported the surveying of the critically endangered plant species, Caley's grevillea (*Grevillea caleyi*) on non-operational land around our Sydney East Substation at Belrose. We will continue to work closely with the Biodiversity & Conservation Division to support this and other localised landscape preservation initiatives.

### Enhancing sustainable work practices

In FY21, as many employees worked from home, we developed an online training package to accompany the electronic waste tracking system launched in FY20. This will enable us to start tracking the generation of various waste streams in FY22.

In FY20, Transgrid generated around 14,429 Tonnes CO<sub>2-e</sub> of direct greenhouse gases. This was a 3% increase on the previous year. We also generated 1,336,619 Tonnes CO<sub>2-e</sub> of indirect greenhouse gases, a 9% increase on the previous year, as a result of transmission losses. As energy transmission becomes cleaner, we anticipate indirect emissions will reduce year on year. We are currently collating emissions data for FY21.



Before vegetation maintenance, we use a spatial system to identify and protect potential habitat for one of Australia's rarest butterfly species: the purple copper butterfly (*Paralucia spinifer*).

### Easement enquiries

Almost 17,000 individual landowners have Transgrid assets, or easements, on their properties. We engage closely with these landholders to maintain and operate these assets and easements so we can provide safe and reliable transmission services to the community. In FY21, we received more than 405 applications from members of the public seeking to carry out developments within or near our easements – a number we expect to increase as development projects progress in the Greater Sydney area and the transmission network is augmented.

Easement enquiries During the year, we progressed consultations with landowners who are potentially affected by the development of our major projects. Positive engagement has allowed early access to understand land-use constraints and undertake early environmental studies. We are also progressing acquisition negotiations for future easements and biodiversity offset properties. To streamline the process for our landowners, we operate an Easement Portal so the community can lodge and track their enquiries and applications online. Following an annual review of the Portal during the year, we are updating it to make it more responsive and in line with customer expectations.

# Future

## Transition to renewables

Transgrid is building a power system that will play a central role in achieving economy-wide decarbonisation. The new transmission infrastructure will support the renewable generation needed for transport electrification and new 'green' industries.

### Energy security for NSW

Transgrid is driving a once-in-a-generation change to the NSW electricity network. During the year, we worked with the NSW Government, and many other stakeholders, to ensure consumers continue to have reliable and affordable electricity while also meeting environmental targets. In FY21, major milestones were achieved for a number of major projects across the state (see our Major Projects update on page 29), which will support the integration of new generation and re-shape the grid to safely provide cheaper, cleaner and reliable energy.

In the coming year, we will continue to work to improve energy affordability and investigate ways to measure the outcomes and benefits of our investments to ensure they are providing value to energy customers.

### Future proofing the grid

New electricity transmission infrastructure is essential to unlocking and sharing new generation sources and addressing the forecast gaps in system strength and inertia to enable a more secure, reliable and affordable energy system for customers. In FY21, we continued to work closely with the NSW and Federal Governments to develop infrastructure resources that meet the future needs of consumers in our cities and across regional Australia.

Our major projects work during the year included the construction of the Queensland NSW Interconnector and Victoria–NSW Interconnector upgrades, which involve the use of innovative technologies to stabilise energy flows on the grid and help to deliver lower cost energy. In parallel, other major network developments continued to address emerging constraints, supporting the connection of new renewable generation, ensuring future demand can be supplied.

### Installing the first large-scale battery in NSW

The power system currently relies on inertia provided by large spinning turbines inside coal, gas and hydro generators to maintain a consistent frequency and help the system ride out any disturbances. As coal-fired generators retire and more wind and solar generation connect to the grid, we will need alternate sources of inertia to stabilise the network. Batteries will be a critical part of solving this challenge – at a small fraction of the cost of traditional technologies, such as synchronous condensers.

In an important step forward for the NEM, in October 2020, the NSW Government and the Australian Renewable Energy Agency (ARENA) announced funding for the first large-scale grid battery in NSW, to be installed at our Wallgrove substation and connect directly to our transmission network.

The Wallgrove Grid Battery project will trial the use of a 50MW/75MWh lithium ion battery, making it the first NSW pilot of grid scale synthetic inertia as a network service. The battery will be designed and constructed by Tesla using Tesla Megapacks and is due to come online in 2021.



# Future

## Major projects update

During the year, our major network developments continue to address emerging constraints, supporting the connection of new renewable generation, ensuring future demand can be supplied. As well as the major projects identified below, Transgrid initiated a regulatory investment test (RIT-T) for improving stability in south-western NSW. This initiative has the objective of relieving constraints currently being experienced by renewable generation in areas to the west of Darlington Point.



### QNI – Queensland to NSW Interconnector

During the year, construction progressed significantly on the interconnector upgrade, which is due for completion in the first half of 2022. Once connected, the project will increase the transfer of electricity between the states and provide customers with access to reliable, lowest cost energy.

The past year has seen upgrades completed to 300 kilometres of existing transmission lines and 58 towers replaced between Liddell power station and Tamworth substation to allow for increased capacity. New power transformers at Tamworth and Dumaresq substations have been installed and are due to be connected to the grid in Q1 of 2022. New capacitor banks have also been commissioned at Dumaresq and Armidale substations.

The upgrade will allow a further 460 megawatts of power to be transferred into Queensland and 190 megawatts more into NSW, delivering net benefits of up to \$170 million to electricity customers. Once completed, the project will have created 280 jobs during almost two years of construction.

### VNI – Victoria to NSW Interconnector

In April 2021, the Victoria-NSW Interconnector (VNI) upgrade project was approved by the Australian Energy Regulator. Design and construction works have now progressed, with substation augmentation civil works undertaken at Stockdill substation. The project reached its half-way mark by late June 2021. More than 100 local people have been employed during the project, including more than 60 people from the ACT and 30 from the Goulburn area.

The project is utilising a new technology for transmission systems called Smart Wires, which increases the utilisation of the existing network by redirecting flows to less congested lines, avoiding the need to upgrade more than 100 kilometres of transmission lines in the Snowy Mountains region.

The interconnector upgrade will increase transfer capacity into NSW from Victoria by 170 megawatts at times of high demand. It will help reduce electricity bills through providing access to reliable, lower cost energy and enable more energy from renewable sources to enter the grid.

### Powering Sydney's Future

In August 2020, work commenced on Powering Sydney's Future. This project involves installing 330kV underground cables along the 20 kilometre route, which will secure the electricity supply for more than 800,000 people living and working in Sydney's CBD and surrounding suburbs.

Milestones during the year include completing all trenching works and conduit installation along the route from Potts Hill to Alexandria. Works were greatly advanced on the construction of a cycleway, incorporated in a new cable bridge on Bedwin Road at St Peters. The cycleway will increase cyclist and pedestrian safety in the immediate area.

Powering Sydney's Future has created more than 140 jobs and will inject \$285 million into the NSW economy.

### HumeLink

During the year, field studies for the Environmental Impact Assessment progressed and landholder engagement regarding route selection continued for the HumeLink project. The proposed 500kV transmission line project will unlock access to new renewable generation in southern NSW, including Snowy 2.0, and enable energy delivery from South Australia via EnergyConnect to the major load centres in NSW. It will increase the amount of electricity that can be delivered to customers in NSW, the ACT and across the National Electricity Market.

HumeLink will connect Wagga Wagga, Bannaby and Maragle in NSW, creating 1,000 regional jobs and stimulating economic activity in southern NSW. If approved by the Australian Energy Regulator, HumeLink will provide net benefits of up to \$491 million, with construction due to start in 2024 and completion expected by late 2026.

### VNI West– Victoria to NSW Interconnector West

During the year, AEMO and Transgrid began jointly undertaking a RIT-T to assess the technical and economic viability of expanding the interconnector capacity between Victoria and NSW. This project will be critical to maintaining reliability of supply in Victoria as Victorian coal-fired generators are retired in the late 2020s and the 2030s. The additional interconnection will significantly increase capacity for low-cost renewable generation in south-western NSW and north-western Victoria. The project will deliver benefits for customers in both states by enabling the efficient transfer of generation resources between the two, helping to improve reliability resilience. Together, AEMO and Transgrid are currently progressing activities to publish a Project Assessment Draft Report under the actionable ISP framework by December 2021.

### Central-West Orana Renewable Energy Zone Transmission Link

In late 2019, the NSW Government approached Transgrid to work together to deliver Australia's first ever coordinated renewable energy zone (REZ), a 3,000 megawatt pilot in the Central-West Orana. During the year, we began feasibility and planning works for this project, which will help to replace generation from NSW's ageing power stations as they retire.

The project is a key part of the NSW Government's Electricity Strategy, and supports the implementation of the AEMO Integrated System Plan – ensuring a reliable, affordable and sustainable electricity future.

Once fully developed, the Central-West Orana REZ will unlock at least 3,000 megawatts of new electricity capacity by the mid-2020s and be worth around \$4.5 billion in private sector investment.

Over the coming months, we will begin engaging with local communities to discuss elements like environmental surveys and route identification. Construction, which is expected to support 450 jobs in the local region, is due to begin in 2022.

# Future

## EnergyConnect

Transgrid is building the future grid to enable cheaper bills, greater renewable generation and lower carbon emissions. By investing in major transmission projects like EnergyConnect, we are reshaping the electricity grid to deliver a more affordable, reliable and cleaner energy future.

### Secure and reliable service

The Australian energy landscape is transitioning to a greater mix of low-emission renewable energy sources, such as wind and solar. At the same time, consumers are demanding lower power bills and more secure and reliable service.

EnergyConnect will deliver the infrastructure required to support this transition. Transgrid is partnering with South Australia's ElectraNet to build the NSW component of the 900-kilometre electricity interconnector, which will connect the energy grids of New South Wales, South Australia and Victoria.

These connections will expand the wholesale electricity market across the three states, resulting in increased reliability and security of electricity supply and lower power bills.

On 31 May 2021, the Australian Energy Regulator approved EnergyConnect, which will be one of Australia's largest infrastructure projects. Approximately 1,200 businesses have registered their interest in working with us on the project, which will create 1,500 new jobs and deliver \$4 billion of economic benefit to NSW.

Operating at total capacity, EnergyConnect will be capable of supplying 8.5% of NSW's total average maximum daily demand, saving NSW customers \$180 million a year on electricity bills.

It will also help to abate an estimated one million tonnes of carbon emissions each year, contributing significantly to meeting Australia's climate change targets.

### Key facts:

Annual savings of  
**\$180million**  
for NSW energy consumers

Net economic benefit  
**\$4Billion**  
to NSW

Almost  
**700km**  
of overhead transmission line

**Critical State Significant Infrastructure** designation from NSW Government

Creates  
**1,500 jobs**

**Expected construction** early 2022

**EPC Contractor** SecureEnergy JV

**Strong community outcomes**





# Future

## Clean energy future

Transgrid is leading the transition to Australia's clean energy future. We're making the right decisions now to prepare for the opportunities and risks ahead: a changing climate, economy-wide decarbonisation and technology innovation.

### A low carbon future

Australia's energy system is transitioning to a renewables based power system faster than previously envisaged. Almost 2GW of largescale solar and wind capacity was added to the NEM in 2020, a further 8GW is under construction and 300 generation and storage projects, totalling 55GW are currently proposed.

Over the coming years, the continued growth in renewable energy installations, low wholesale electricity prices and a possible strengthening of Australia's emissions reduction targets could contribute to the earlier than anticipated withdrawal of coal-fired generation.

We believe Australia's high-quality renewable energy resources can underpin its success in a low-carbon future – but only if we prepare the grid for a different generation mix. Already, the growth in renewables is leading to increased congestion on the transmission system. In the last year, 5,665MW of renewable energy generation has enquired about connecting into Transgrid's network, yet there are only hundreds of MW of spare capacity available.

We must also prepare for a major uptick in electricity demand from electric vehicles. A recent study by Energeia for Transgrid shows that electric vehicles will comprise nearly 50% of all vehicles in use by 2040 in the NSW region.

At the same time, our power system must be sufficiently robust to withstand changing climate patterns, as more frequent weather extremes cause increasingly challenging operating conditions.

### Working on new possibilities

Transgrid is working to find innovative solutions to these increasingly challenging power system conditions, developing a new suite of technologies, services and products. We are already building the new electricity transmission infrastructure essential to unlocking and sharing new generation sources, enabling a low emissions and affordable energy system for the future.

As well as the interconnection and renewable energy zone projects described on page 29, we are also exploring batteries and other emerging technologies. During the year, our commercial arm, Lumea, continued to develop a battery at our Wallgrove substation in Western Sydney to trial the supply of synthetic inertia to the grid (see page 26).

In July 2021, Lumea called for expressions of interest to participate in – a market-funded, 300MW battery at the Deer Park energy hub, the key source of power supply for metropolitan Melbourne.

# Lumea

## Creating market-first solutions

Lumea CEO, Richard Lowe, answers questions about the launch of Transgrid's commercial arm under its own brand in May 2021.

### Tell us about your growth story

In the past six years, Transgrid's commercial arm has grown rapidly, from a team of 3 to more than 50 people, including a Melbourne office. In 2015, we won the contract to develop connection infrastructure just west of the Melbourne CBD, which is now a key source of power in Victoria. It was our first project outside of Transgrid's legacy state jurisdiction – an important milestone. Today, we are a leading essential infrastructure service provider creating market-first solutions to accelerate the energy transition and providing bespoke solutions to renewable energy generators, and large load customers. We currently have 11,000 MW of renewable energy projects in operation or under construction, enough to power three million homes. We're also one of the leading telecommunications providers to renewable projects in Australia, with a focus on regional areas, data transmission and emergency broadcast services.

### Why launch a separate brand?

The decision to launch Lumea came as a response to listening to our customers. The energy industry is undergoing rapid and fundamental changes and Lumea is at the forefront of providing a range of solutions to make a better power system for Australians. Our customers need a dedicated team to provide them with solutions to help get their renewable projects to market quickly. That means new and innovative pathways and competitive commercial agreements. Rebranding as Lumea better reflects who we are today, giving us a distinct identity that resonates with our customers.

### Why Lumea?

Lumea symbolises the illumination of new ideas through a fresh way of thinking. It represents our ambition to light the way by providing bespoke solutions that will accelerate Australia's energy transition.

### What is Lumea's role in the energy transition?

Lumea is committed to supporting the goal of net zero carbon emissions by 2050 by finding creative answers to complex problems, enabling our customers to get reliable, sustainable power into the energy market – faster. We invest in innovative projects and smart technology that help accelerate Australia's energy transition. And we help our customers solve complex problems so they can produce, deliver and use clean, reliable energy and bring better digital communications to all Australians.

### Why do customers choose Lumea?

Customers want greater choice and flexibility, as well as engineering excellence, network experience and regulatory insights. Lumea has incredibly bright minds working to ensure that we bring all of that to the table, enabling us to deliver in the fastest, most commercially beneficial way possible. The fact that we will be the architects of Australia's first commercial battery at Deer Park (see page 26) speaks volumes.

At the same time, our telecommunications business offers services on one of the largest, most secure and modern networks in Australia – the first in the country to be accredited to the Metro Ethernet Forum 3.0 standards.

### What vision does Lumea have for Australia?

We see a bright energy future where Australians are afforded safe, reliable and low cost energy, with Lumea accelerating this transition to a clean energy future by creating innovative pathways to get us there.

### What are your priorities for FY22?

Lumea will continue to pursue innovative projects such as the Deer Park and Wallgrove batteries, data centre infrastructure, optimising the roll out of mobile networks in regional areas, as well as expanding our energy business geographically and developing solutions for future industries, such as closed circuit microgrids and transport electrification.



“Lumea symbolises the illumination of new ideas through a fresh way of thinking. It represents our ambition to light the way by providing bespoke solutions that will accelerate Australia's energy transition.”

**Richard Lowe**  
Lumea CEO

# 11,000MW

of renewable energy projects in operation or under construction

# Lumea

## Renewable energy projects

In FY21 Lumea provided connections services for nine renewable energy projects, supporting 1,200MW of new renewable generation to the National Energy Market.

### Renewable generation project highlights

- Limondale 1, with a capacity of 220 megawatts connecting at the Balranald 220 kV busbar was registered on 30 June 2020. This followed the registration of Limondale no. 2 connecting at Balranald, which was registered in December of 2019.
- The Darlington Point Solar Farm, which has a total of 330 megawatts, making it the largest solar farm connected to the NEM. With nearly 1 million solar panels spread over 1,000Ha, the Farm will provide clean energy to more than 110,00 homes.
- Wellington Solar Farm, which is 200 megawatts and connects at Wellington North busbar, achieved AEMO registration on 11 August 2020. The farm is adjacent to the Wellington North Solar Farm, which once operational will create a 600 megawatt solar hub.
- Collector Wind Farm, which is 226 megawatts connecting into line 4 between Marulan and Yass, achieved AEMO registration on 10 November 2020. The wind farm will potentially save approximately 320,000 tonnes of CO2 emissions.
- Sunraysia Solar farm, which has a total capacity of 255 megawatts connecting at Balranald, achieved AEMO registration on 10 November 2020.
- Molong Solar Farm, which is 30 megawatts and connects at Molong substation, achieved AEMO registration on 10 November 2020.
- Crudine Ridge Wind Farm, which a capacity of 138 megawatts and connects at 132kV busbar, successfully achieved AEMO registration on 24 November 2020.

- Bango 973 Wind Farm, with a capacity of 160 megawatts, achieved AEMO registration on 15 December 2020 and connects at Bango substation. The Bango 999 Wind Farm also connects at the Bango substation and is 83 megawatts, achieving AEMO registration on 25 May 2021. Once fully operational in late 2021, it will be the third largest wind farm in NSW.
- Wagga North Solar Farm, which is 50 megawatts connecting at Wagga North substation, achieved AEMO registration on 8 June 2021.
- Gunnedah Solar Farm, which is 110 megawatts, connects into the Gunnedah – Boggabri East line. The solar farm achieved AEMO registration on 29 June 2021 and is anticipated to produce the energy to power 48,000 homes per year.

### Innovation

Our market-first projects are testing innovative technologies and dynamic approaches to accelerate Australia's energy future, from large-scale generation connections to utility-scale storage and integrated energy. We initiate and collaborate on market first projects that redefine the way things have always been done. During the year, Lumea continued to bring together essential infrastructure services in newer and smarter ways. For example, we used our expertise in privately funded market entry solutions to execute a world first renewable energy capacity auction in New England, and are piloting the use of grid-scale synthetic inertia using battery technology in Western Sydney.

### New England connection capacity auction

Lumea's New England Transmission Infrastructure development is progressing a new model for renewable energy capacity auctions, designed to maximise private sector investment in renewable energy and accelerate the delivery of a further 1,400MW of reliable, affordable energy to the market. The project will create 2,000 construction jobs and, once commissioned, will provide 150 permanent roles in operations and management.

In June 2021, we conducted a commercial process to seek interest from renewable energy companies to connect into the new transmission line. Four renewable energy developers have been shortlisted for the development phase and will enter detailed negotiations over the next 12 months. The shortlisted parties are all established project developers with a strong record in developing renewable energy projects and are currently developing renewable energy projects close to the proposed transmission infrastructure.

In the coming year, we will engage with local stakeholders near the proposed substation and transmission line and begin community engagement and environmental surveys.

Renewable energy connected supplies

**\$4million**

households

## New connections

From energy generation to large load customers, LUMEA™ provides individualised connection services that support the development of renewables.

Renewable projects in FY2021 include:

Site Name	MW	Type	Complete FY - FY21
Bango Wind Farm	240	Wind	In FY21
Berrybank Solar Farm	180	Solar	In FY21
Collector Wind Farm	165	Wind	In FY21
Crudine Ridge Wind Farm	135	Wind	In FY21
Suntop Solar Farm	150	Solar	In FY21
Molong Solar Farm	30	Solar	In FY21
Wagga North Solar Farm	50	Solar	In FY21
Wellington Solar Farm	170	Solar	In FY21
Berrybank Solar Farm Stg 2	100	Solar	Under construction
Gunnedah Solar Farm	80	Solar	In FY21
New England Solar Farm	800	Solar	Under construction
Riverina Solar Farm	45	Solar	Under construction
Snowy 2.0 Connection	2200	Hydro	Under construction

New generation connections under construction

**3,145MW**

12 projects

Renewable generation connected into the NEM

**1,200MW**



# Lumea

## Telecommunications

FY21 was a year of growth and resilience for the Telecommunications business. The investments we made in our network, technology, automation and digitisation have set us up for ongoing growth and long-term success.

### Rapid growth

Rapid growth during the year saw Lumea become one of the largest providers of telecommunications services to renewable energy projects in Australia, including renewable energy zones and special activation projects. New customers included: Water NSW, NSW Records, SunTop Solar Farm, +ES, Newcastle Connect, Greenlight Contractors and St Paul's College. Having seen the robustness of our assets in the extreme weather events of storms and floods, Optus purchased additional services from us to boost their own network resilience.

### Data services

Lumea data services manages commercial operations on one of the largest fibre optic networks in Australia. Our goal is to continue growing the digital economy and bridging the digital divide. In FY21, we became the first telecommunications company in Australia and New Zealand to have our Carrier Ethernet network certified to the globally recognised Metro Ethernet Forum 3.0 standard, demonstrating our commitment to deliver innovative solutions that power digital transformation.

During the year, we partnered with Ciena to replace the redundant equipment on the backbone network. The upgrade will support bandwidth-intensive, high-speed applications for our wholesale, government and enterprise customers, such as those needed in healthcare. This will equip us to deliver to regional businesses the same level of performance enjoyed in metropolitan centres.

We also partnered with IBM and Juniper to launch our SD-WAN service, which helps our customers to minimise or eliminate network points of failure. The new service was quickly selected as a provider on the NSW Government Telecommunications Panel.

The year saw an improved fibre network reach and reliability through third party partnerships with power and utility organisations, including Endeavour Energy, Essential Energy, +ES, Ausnet, AARnet, Sydney Trains. We also developed a solution to address mobile blackspots and support internet connectivity for communities along the proposed Humelink corridor.

In FY22, we will seek to expand the network with Queensland Capacity Network in Queensland and ElectraNet in South Australia. We will also work with data centre players in edge computing to help power the digital economy of regional NSW.

### Wireless colocation

Fibre is the critical infrastructure of the modern economy and the backbone of every digital communications system. Our Wireless Colocation business leases space on a range of 37,000+ towers and Radio Repeater Sites to mobile carriers and government agencies. During the year, we invested in automation to provide a faster and more efficient service for customer applications and built capability to support the digital transformation and growth of 5G and critical communications.

### Digital twin gives customers virtual site access

In FY21, Lumea partnered with LeBLANC and SiteSee to create a world first: a fully digitised infrastructure portfolio accessible through a self-service portal, streamlining applications, inspection and maintenance activities for Lumea's customers. The self-service portal means our customers will be able to access 3D Digital Twins of our towers and their equipment, giving them absolutely precise data in both geometry and scale. The platform will enable customers to virtually scope sites in 3D, rather than having to make physical site inspections, and instantly deliver accurate 'As-Surveyed' information and inventory comparison reports with UAV mapping. Customers will also be able to virtually add and remove their equipment.

### Data Services business grew

**24%**

year on year

# Community

## Community engagement

Transgrid’s high voltage transmission network flows through and serves communities in all urban, regional and rural areas of NSW and the ACT. FY21 brought new challenges in community engagement as we sought to involve stakeholders in different ways while planning and operating our network.

### An extensive program

The year saw an increasing number of major projects taking shape in regional NSW and ACT, requiring extensive community and stakeholder engagement to communicate, inform and consult on our plans for the future of the NSW high voltage network.

Our EnergyConnect community engagement team continued to roll out its extensive program to understand environmental, social and engineering considerations of a project that will transform the NEM. We sought feedback on the Environmental Impact Statement for the Western Section of the project, from Red Cliffs to the South Australian border. Hundreds of individual community members were engaged, including landowners, businesses, special interest groups and all levels of government, providing insights around matters including community benefits, land use conflict, employment, economic benefits and environmental concerns.

Across all our major projects, we ran extensive campaigns on social media, via local print news and through direct mail and email to interested parties. We held COVID-safe site visits and meetings to record and document issues as part of our project assessment and project delivery. These programs led to a growing engagement team working with the community, councils and elected representatives in areas including the Central West, New England, Hunter, Riverina and South Western NSW.

Our Power Sydney’s Future team worked hard to keep the community and local businesses informed during an intense construction program of day and night works to bolster reliability throughout the Inner West.

We also supported the operation and maintenance of the existing network of 13,204 kilometres of transmission lines and cables and more than 12,000 landowners with thousands of letters, phone calls and interactions around inspections, tree trimming and structural works to keep the network operating safely and reliably.

### Establishing the Office of the Landowner and Community Advocate

Constructing new assets impacts the communities and landowners who reside in the vicinity of these projects. During the year, we established the Office of the Landowner and Community Advocate to help us implement the best possible landowner and community engagement practices across all of our major transmission projects. This function is led by former NSW Commissioner for Fair Trading, Rod Stowe, who will advocate on behalf of landowners and communities directly to our CEO and Board – and has already led positive changes in the ways we deliver our Humelink engagement program. We continued to refine our approach to engaging landowners, farmers, businesses and other stakeholders from Bannaby to Maragle and Wagga Wagga. In FY21 we met with more than 400 landowners within the study corridor to hear their views on potential route options, environmental and cultural considerations, local farming operations, logistics and land use.



# Community

## Delivering community benefits

Bolstering local communities and not-for-profit group initiatives have a measurable impact on the wellbeing and development of both the community and individual.

### Program recipients included:

#### Defence Shed, Wagga Wagga

Defence Sheds are based on the Men's Shed Principle, offering assistance to all current and ex-Australian Defence Force personnel and Emergency Services personnel and their families. The Transgrid grant was used to purchase tools, including hammer drills, saws, torches and a tradie's radio for the Wagga Wagga Defence Shed group.

#### Nari Nari Tribal Council

Nari Nari Tribal Council is a not-for-profit Aboriginal organisation committed to the restoration and protection of country and culture, which manages 100,000 hectares of lands west of Hay, NSW. The Transgrid grant funded two automated, portable defibrillator machines to be used by staff traveling On Country at Gayini Conservation Area and Toogimbie Indigenous Protected Area.

#### Uranquinty Rural Fire Brigade

Each year, crews from the volunteer-run Uranquinty Rural Fire Brigade attend around 25 incidents from grassfires to road accidents in the area surrounding the small township 16km from Wagga Wagga. A number of eFlares, torches and lighting units were purchased using the grant to enable night work, increasing the safety of firefighters and motorists.

#### Wentworth District Pre-School

At the community-based Wentworth Preschool, playground temperatures can reach up to 40 degrees Celsius on a summer's day. The preschool used its grant to purchase a large shade sail to cover the playground equipment, so children can safely play throughout the year.

#### Erin Earth and CareVan

CareVan provides nightly meals and social connection for homeless, disadvantaged and isolated people in the Wagga Wagga community. Erin Earth teaches people how to live more sustainably in their own homes. Transgrid's grant enabled Erin Earth to partner with CareVan to build a vegetable garden to support the growth of produce used in the 750 meals the team prepares each week.

In FY21, we invested in a variety of initiatives, focussing on those that provide community benefits, including support for Indigenous communities, rural communities and women, education opportunities, environmental sustainability and safety initiatives.



As part of Project EnergyConnect Transgrid provided a community grant to the NSW RFS - Uranquinty Brigade to purchase new lights torches and e-flares to help guide traffic at accident scenes. We're proud to be able to support the work of vital community groups such as the RFS.



We're proud to have worked with local Member the Hon Anthony Albanese MP (far left) to deliver a new bus to the Ethnic Community Services Co-operative in Marrickville. Transgrid is funding the bus as part of our Community Partnerships Program, which provides grants to communities in areas where our assets are located or under development.

# Community

## Community Partnerships Program

Through our Community Partnerships Program, we invested more than \$140,000 in 27 initiatives that will have a tangible and lasting impact on local communities in areas where our assets are located or under development.

Beneficiaries	Location	How the funding is being used
Abbotsford Park Trust	Wingen	Upgrading and maintaining various areas of the grounds
Ashbury Community Garden	Ashbury	Improving accessibility and inclusivity features within the garden environment
Australian Botanic Gardens Inc	Mourquong	Replacing signs in the gardens for visitor information
Border Western Horse Group Inc.	Mourquong	Purchasing first aid equipment and first aid training for members
Centacare South West NSW	Wagga Wagga	Providing Youth Aware of Mental Health (YAM) programs to High School students in the region
Coleambally Central School P&C	Coleambally	Building a Covered Outdoor Learning Area (COLA) for the students
Coleambally Volunteer Rescue Squad	Coleambally	Purchasing new tools for faster and more efficient rescues
Country Education Foundation of Edward River Region	Edward River Region	Creating educational grants for young people in the community who are seeking tertiary education
Defence Shed Wagga Wagga	Wagga Wagga	Purchasing welding equipment for members to practice welding and fabricating skills
Deniliquin High School P&C	Deniliquin	Developing a modern sustainable irrigation project to educate students studying agriculture
Hay Branch ICPA	Hay	Supporting the community's wellbeing and lifestyles through a day of educational workshops and demonstrations
Hay Plains Landcare	Booligal	Creating the Booligal Community Native Garden at Booligal Public School
Lockhart Football and Netball Club	Lockhart	Purchasing equipment for members and guests
Maude and District Community Association Inc.	Maude	Providing education on food safety and efficient power usage for the Maude Village and surrounding district
Menindee Central School – Western Landcare NSW	Menindee	Repairing and refurbishing the old plant nursery and creating a native fruit and herb kitchen
Murrumbidgee Men's Group	Wagga Wagga	Supporting the men of the community with free BBQs during the fortnightly meetings
Nari Nari Tribal Council	Hay	Purchasing a defibrillator unit to be used by staff On Country
Ocean Future Fund Inc.	Canterbury	Building a community garden, aquaponics system and outdoor classroom within Canterbury Boys High School
Outback Theatre for Young People	Bunnaloo	Designing and installing a large scale mural and delivering creative engagement workshops to Bunnaloo Public School
Ronald McDonald House Wagga	Wagga Wagga	Planting and fertilising capital pear trees in the courtyard to provide a shaded and peaceful area for families
Rural Outreach Counselling	Rural NSW	Providing five suicide awareness training and education workshops to community members including youth
St Vincent de Paul Society - Balranald St Dymphna's Conference	Balranald & Tooleybuc	Providing individually packed food hampers including a present for children under 12 years facing challenges
The Rock Pony Club	The Rock	Purchasing show jumping equipment and cross country jumps for the children
Urana Arts and Historical Society	Urana	Developing a film and exhibition on Freddie Fox
Uranquinty Rural Fire Brigade	Uranquinty	Purchasing safety equipment, torches and lighting for firefighters
Wagga Wagga Show Society Inc	Wagga Wagga	Replacing all switchboards and equipment
Wentworth District Preschool	Wentworth	Installing large shade sails over the play equipment

# People

## Investing in 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.

### Creating a diverse and inclusive workplace

At Transgrid, we leverage diversity and foster inclusion so all employees feel valued and respected and can do their best each day to deliver the best business outcomes. To do this, we strive to ensure all our people feel a sense of belonging, regardless of their gender, age, cultural identity or sexual orientation. In FY21, we further supported inclusion by implementing a hybrid work model, allowing people the flexibility to work in an environment where they feel comfortable and can be most productive.

During the year, a continued program of targeted gender strategies saw our gender metrics improving across the board, with women in leadership increasing to 27%. In February 2021, we launched the Energise network, to build stronger connections and support for women at Transgrid. The network, which has executive leader sponsorship, provides an opportunity for women to connect with inspirational colleagues across the business.

We also continued to:

- Offer career coaching for female managers and above, with 15 females taking part in the six-month individual coaching program.
- Conduct an annual gender pay gap review to identify and address any gendered biases and identify processes for improvement.
- Deliver a clear and consistent message that Transgrid supports action against domestic violence. Our approach, measured against WGEA benchmark in 2021, continues to be best practice.

During the year, we continued to provide coaching for all parents navigating the return to work after parental leave. We are pleased that 43% of those taking primary care leave were men.

In August 2021, we established RISE, an Alley Network to support LGBTQI+ inclusion, championed by the Head of People and Culture. RISE is a significant step forward in creating an inclusive work environment that is safe, equitable and respectful – where all our employees can bring their whole selves to work.

As our reputation in the market as an employer of choice has continued to grow, our hiring has become increasingly diverse. In FY21, 50% of our graduates were female, 30% of apprentices were female and 10% were First Nations people. To maintain this momentum, we continued to partner with UTS and UNSW to provide scholarship opportunities for women in STEM, and with Career Trackers to provide intern opportunities for First Nations students.

Year	Women	First Nations People
2016	19%	1.0%
2017	20%	1.3%
2018	20%	1.0%
2019	22%	1.8%
2020	23%	2.0%
2021	24%	2.0%

### Protecting wellbeing

During the year, our investment in mental health programs contributed to employees' continued positive productivity and wellbeing outcomes. Programs and measures established in FY21 to create a culture that facilitates early identification of mental health issues and encourages help-seeking behaviour include:

- **WorkMates** – A formal support structure with 60+ WorkMate volunteers trained to confidentially respond to colleagues struggling with aspects of their mental health. The program, which leverages our safety culture, was well received and used by employees as an important first-line mental health support intervention.
- **Thrive** – An online wellbeing hub available on mobile phones offering all employees, including those in the field, free physical and mental health resources. Since launching in February 2021, 4,500+ individual wellbeing resource downloads have been accessed.
- **Mental health early intervention** – This approach ensures that people are supported early, with a view to preventing mental health conditions from developing and supporting individuals during recovery.

### Top graduate training award

In February 2021, Transgrid's Graduate Program 'Leaders of Tomorrow' was recognised by Grad Australia as the best in the energy and utilities sector. The award was selected based on the quality of the training program, graduate satisfaction scores, diversity, culture and how popular it was among students. Transgrid was also named by Grad Australia as one of Australia's Top 100 Graduate Employers based on feedback from graduates, coming in at number 80 from 570 leading employers.

**Colette Yoong**   
Compliance Officer



# People

## Supporting reconciliation

Transgrid is working to help create a more equitable future. Our aspiration is towards a future where Aboriginal and Torres Strait Islander Peoples' deep knowledge of, and connection to, land is respected and celebrated by all.

### Reconciliation Action Plan (RAP) initiatives

In FY2021, we continued to embed Reconciliation across the business by delivering the initiatives outlined in our Innovate Reconciliation Action Plan February 2020- February 2022. Highlights included:

**Cultural Learning Program** – More than 28% of employees participated in our first year of this program, with 175 senior and customer-facing employees undertaking face-to-face cultural awareness training with the Aboriginal-owned Mirri Mirri organisation. A further 225 completed the Corporate Culcha e-learning module, which now forms part of our induction, leading to greater understanding of and appreciation for First Nations cultures.

**2020 NAIDOC Week celebrations** – Launched by our CEO and Dharug Elders Uncle Wes Marne and Uncle Greg Simms. More than 270 people attended our key event featuring Roy Ah See, who shared his journey about how he came to work in key advisory roles to the Prime Minister and the NSW Aboriginal Land Council.

**2021 Reconciliation Week** – Including stories on Aboriginal and Torres Strait Islander leaders on Transgrid Radio, virtual and in-person events across NSW.

**Yarn-up** – Our employee network for Transgrid's First Nations employees, which continues to meet regularly.

In September 2020, we formally reported our RAP progress to Reconciliation Australia. This included findings from Reconciliation Australia's Barometer Workplace Survey in July 2020, which recorded 76% of Transgrid respondents reporting clear leadership from our senior managers towards reconciliation – 6% higher than the average for other RAP organisations.



Leticia Quince receiving the Transgrid Indigenous Achievement Award from Transgrid's Head of Land, Community and Environment, Heather Wagland, at the 7 News Young Achievers ceremony in April 2021. Leticia is a proud Wiradjuri woman who supports Aboriginal graphic design small businesses to build impactful brands, be empowered and confident through sharing their products, services and talents.

### Engaging with Indigenous communities

For Transgrid, an important aspect of our Reconciliation journey is our inclusive and respectful engagement with Indigenous Australians across the communities in which we work. In FY21, we began regular engagements with Heritage NSW to discuss our engagement and approach with Indigenous Australians and sought feedback on our approach to managing and protecting Indigenous cultural heritage.

We also worked closely with Indigenous communities to present up-to-date information on our major projects. Our approach was to work beyond compliance and industry targets. We provided early engagement and genuine consultation, connecting community leaders with our business leaders, to ensure decision-making was made at the community level.

During the year, we developed a register of the 71 Local Aboriginal Land Councils that our assets interact with across NSW and ACT, identifying where our assets are located within council boundaries, and highlighting any known Aboriginal sites and sensitive areas known to the community that are in close proximity to our assets.

In the coming year, we look forward to fostering and further developing long-term trusted relationships with Indigenous communities and identify areas for involvement in cultural heritage management.

**Kelly Huxley**  
3rd Year Substation  
Technician Apprentice

### Increasing apprenticeship opportunities

During the year, we continued to build our apprenticeship program as part of our sponsorship of the Clontarf Foundation, a not-for-profit that aims to improve the life skills and educational prospects of young Aboriginal and Torres Strait Islander young men.

The four-year apprenticeship combines on the job training with classroom-based theory, providing a pathway to a career in the energy industry. Apprentices gain a Certificate III in Electrotechnology Electrician upon completion. The majority of our apprentices go on to secure permanent employment with Transgrid.

Recruitment for next year's apprenticeship program is now in progress, with the program due to start in January 2022.

# Board



Jerry Maycock

**Chair**

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

Jerry was appointed as Chair of Transgrid on 22 February 2018. 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 children's education charity The Smith Family.



Rick Francis

**Director and Deputy Chair**  
*B.Com, MBA, CA, GAICD*

Rick was appointed a Director of Transgrid on 16 December 2015. He has more than 18 years experience in the Australian energy and infrastructure industries, and has been the Managing Director and Chief Executive Officer of Spark Infrastructure since May 2012.

Prior to that, he was Chief Financial Officer at the ASX listed gas transmission and energy infrastructure business APA Group for four years. He also spent more than eight years at Origin Energy Limited in a number of senior management roles including Group Financial Controller and Operations Manager, Energy Trading.



Charles-Edouard Mariolle

**Director**

*MBA, GAICD*

Charles-Edouard has a long standing experience in energy infrastructure, project finance and corporate governance.

He has a Masters in Entrepreneurship from HEC Paris (France), and Masters in Engineering from ENSIMAG (France) and Universidad Politecnica de Madrid (Spain).

Prior to joining CDPQ in 2018, Charles-Edouard participated to numerous transactions in the energy sector in Europe, successively as a senior manager with Deloitte, as the founder of renewable energy developer ECDS ultimately sold to an 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 more than 3.5GW of new renewable generation across Europe and received multiple awards for its leading ESG approach and investment strategy.



Jean-Étienne Leroux

**Director**

*Director B.Com, M.Sc. Financial Engineering*

Jean-Étienne was appointed to the Transgrid Board on 16 December 2015. He has been Managing Director, 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 & 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 image in the region and in representing the organisation with the financial and business community, 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 the 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 on their board of directors. He has previously served on the Boards of InTransit BC (Vancouver, British Columbia), the Budapest Airport and South East Water (UK).



Julie Stanley

**Director**

*B.Comm, CA, GAICD*

Julie 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 also 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 investigating accountant services to public and private companies with a focus on energy and infrastructure.



Dr Keith Turner

**Director**

*Director BE (Hons), ME, PhD, Elec Eng, FIEE, FIPENZ, FNZM*

Keith was appointed to the Transgrid Board on 16 December 2015. He possesses extensive experience in the New Zealand energy sector, and served as Chief Executive Officer of Meridian Energy Limited from 1999 to 2008. Prior to that, he worked as a private energy expert advising a range of large corporate clients and Government.

Keith has served in senior roles at Contact Energy, the Electricity Corporation of New Zealand, and the New Zealand Electricity Department. He had also held many industry reform roles. Keith is a former Non-Executive Director of SA Power Networks, Victoria Power Networks, CitiPower and Powercor, Chorus NZ Limited, Deputy Chair of Auckland International Airport, and Chair of Fisher and Paykel Appliances Limited. He is currently a Director of Trustpower Ltd, Chair of Damwatch, and holds several government appointments.



Christopher Curtain

**Director**

*Director BBus, MAppFin, GAICD*

Christopher 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 UK, and other roles with the RBA and NAB. Christopher is also a Director of Port of Melbourne.



Kevork Sahagian

**Director**

*MFIN INSEAD, BCom, GAICD*

Kevork was appointed to the Transgrid Board on 23 March 2021. He is a Director in the OMERS Infrastructure Sydney office and joined OMERS in October 2019. Kevork plays a key role in the origination, execution and management of OMERS infrastructure investments, primarily in Australia and New Zealand. Kevork also serves on Port of Melbourne's Board of Directors. Prior to joining OMERS, Kevork was focused on advising a range of corporate, institutional and government clients on M&A transactions, privatisations, financing and capital markets activities in the transport, infrastructure, power and utilities sectors.

# Board



Steven Fitzgerald

**Director**

*B.Ec, MAICD*

Steven was appointed to the Transgrid Board on 1 July 2018. He is Head of Asset Management for HRL Morrison & Co with responsibility for the performance of private market investments made on behalf of clients.

Steven joined Morrison & Co in 2011 after 13 years of senior executive experience at Wellington International Airport, Infratil Airports Europe and Sydney Airport. Steven is also a Director of Queensland Airports and Perth Airport.



Gordon Hay

**Director**

*B.Eng (Hons), MBA*

Gordon was appointed to the Transgrid board on 1 July 2018. He is an Executive Director at Morrison & Co, and he is 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.



Dr Warren Mundy

**Director**

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

Warren 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 Airservices 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 Regulatory Committee and of the trustee of the NSW Electricity Networks Assets Trust.

# Leadership team



Brian Salter

**Chief Executive Officer (Acting)**  
*BA (ANU), LLB (Hons) (ANU), LLM (Hons) (Syd)*

Brian is a highly experienced legal executive.

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.

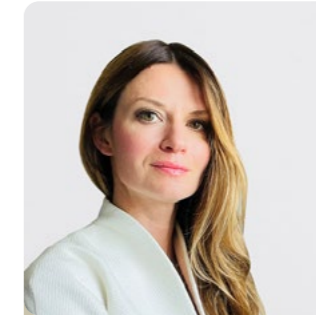
Brian is the former Chair of both the General Counsel 100 and SCECGS Redlands. He was a long-time member of the Legal Committee of the Australian Institute of Company Directors (AICD) and the Corporations Committee of the Business Law Section of the Law Council of Australia.



Jeff Forrest

**Chief Financial Officer (Acting)**  
*BA (Hons), MBA*

Jeff has 15 years of infrastructure finance and corporate advisory experience. Prior to joining Transgrid in 2018 he was a Principal at L.E.K. Consulting where he provided growth strategy, performance improvement and transaction advisory services across a broad range of industries. His career has spanned the energy sector across North America and Asia Pacific, including utilities, solar and biomass generators, and electric vehicle manufacturers.



Kasia Kulbacka

**Executive Manager Network Planning and Operations**  
*BEng, MSc*

Kasia joined Transgrid in July 2021 after a career as a leader in the US power utility industry, where she focused on modernising assets and enabling the transition to a renewable and clean energy future. Within her 15-year tenure at National Grid, Boston she held senior leadership and executive roles within transmission network planning, asset management, transmission systems engineering, commercial services and aviation.



Eva Hanly

**Executive Manager Strategy, Innovation & Technology**  
*BEng (Hons), BA, MBA, AICD*

Eva is responsible for the functional areas of strategy, future energy, policy, commercial development and innovation and technology at Transgrid. In this role she is leading Transgrid's growth and transition into an energy services company.

Eva has over 20 years' experience in the infrastructure industry with a background in delivering multi billion dollar capital projects, establishing new businesses, driving growth and leading transformational change. Before joining Transgrid, Eva was General Manager NSW Development at Transurban, responsible for the growth pipeline, and led the PMO for the Transurban consortium's \$9b WestConnex transaction.

Prior to that, Eva was General Manager Commercial at Origin Energy looking after Origin's investment in the \$25b APLNG project, the CSG gas trading business and the operated and non-operated joint ventures.

Eva sits on the Deans Advisory Council for the Faculty of Engineering at UNSW and was a founding board director of Engineers without Borders.

Transgrid also thanks Paul Italiano, Jason Conroy and Sean McGoldrick for their contributions to the Leadership team for the 2020/21 financial year.

# Leadership team



Richard Lowe

**CEO, Lumea**  
*LLB*

Richard 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 businesses including new connections and network expansion, energy services and telecommunications and commercialising new technology initiatives.



Craig Stallan

**Executive Manager, Works Delivery**  
*BEng (Hons), GAICD*

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

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



Paul Howard

**Executive Manager Legal, Governance & Risk (Acting)**  
*BCom / LLB, GAICD*

Paul joined Transgrid as Company Secretary in 2020, and now has responsibility for legal, governance, risk, audit and compliance obligations across the business.

Prior to Transgrid, Paul was on the Executive Team at Rest Industry Super (one of Australia's largest super funds) where he was responsible for the legal and company secretary teams and at varying times compliance and audit. He was also Acting General Manager Investments for six months. Paul has also worked in several other roles both in-house and in private practice, having started his career in New Zealand.



Chris Pemberton

**Executive Manager, Corporate Services**  
*BEng (Hons), MBA, AGSM, GAICD*

Chris has extensive experience in improving business performance, service delivery and people engagement supported by a diverse background in corporate and business strategy, infrastructure, operations, IT, purchasing, property and engineering.

In his previous role as Group Head Corporate Services for Downer, Chris led the IT, procurement, shared services, property and business system transformation and the business cost reduction program. Prior to joining Downer, Chris ran his own consulting practise and held a number of senior leadership roles with Qantas.

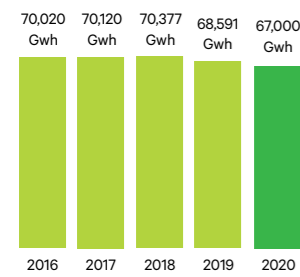


# Performance

## Key indicator review

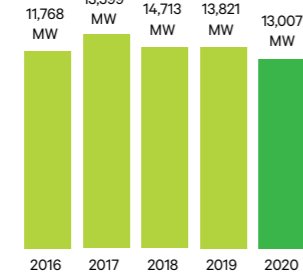
Transgrid is committed to creating and sustaining long-term value. We delivered a strong financial performance this year, driven by revenue from our non-prescribed business totaling: \$132.7 million.

### Network throughput (energy sent out)



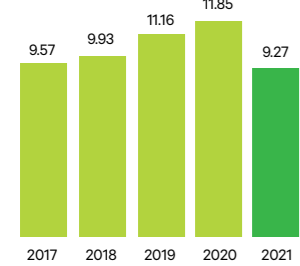
**-2.4%** ▼  
Decrease from FY20 to FY21

### Peak operational demand



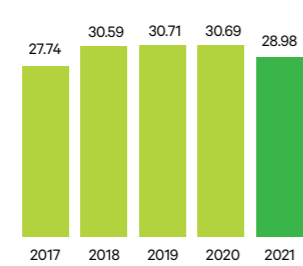
**-6.4%** ▼  
Decrease from FY20 to FY21

### Wholesale price (c/kWh)



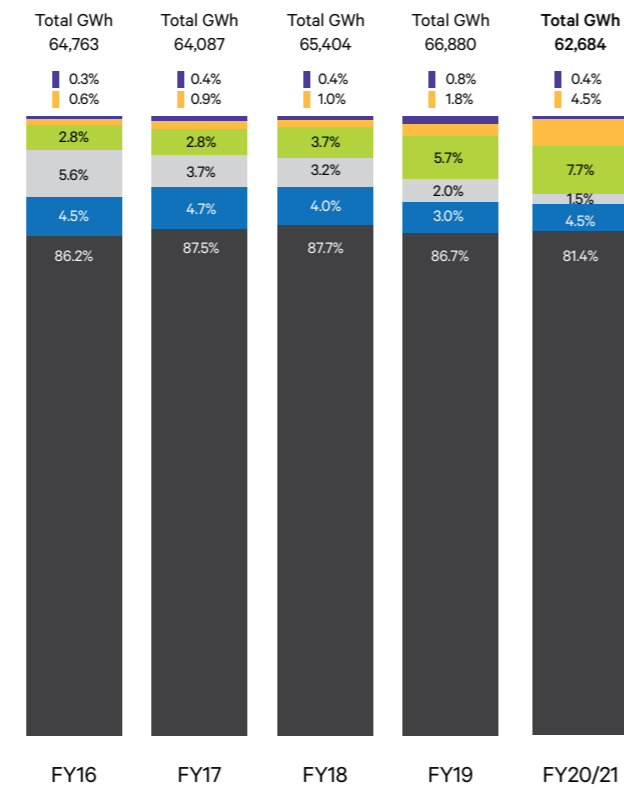
**-19%** ▼  
Decrease from FY20 to FY21

### Market offer retail price (c/kWh)



**-5.45%** ▼  
Decrease from FY20 to FY21

### NSW generation output



● Black coal ● Hydro ● Gas  
● Wind ● Large Scale Solar ● Other

## Key financial indicators

	FY21 \$m	FY20 \$m
Prescribed revenue	784.8	755.9
Non-prescribed revenue	132.7	109.1
<b>Total revenue</b>	<b>917.5</b>	<b>865.0</b>
Operational Expenditure (opex)	(223.4)	(198.8)
<b>Underlying EBITDA</b>	<b>694.2</b>	<b>666.2</b>
<b>Net Profit</b>	<b>4.8</b>	<b>2.4</b>
Prescribed capex	199.8	229.6
Non-Prescribed capex	159.3	238.3
Major Projects	587.7	95.3
<b>Total Capex</b>	<b>946.8</b>	<b>563.2</b>
Total PPE	8,396.9	7,800.6
Intangible Assets, Investment Property & Other assets	3,151.5	3,422.3
<b>Total Assets</b>	<b>11,548.5</b>	<b>11,222.9</b>
External debt	(6,363.6)	(5,954.8)
Other liabilities	(843.6)	(1,214.9)
<b>Net Assets</b>	<b>4,341.2</b>	<b>4,053.3</b>



People. Power. Possibilities.