towards 2030

TasNetworks
Delivering your power

October 2020

Our Vision

Trusted by our customers to deliver today and create a better tomorrow.

Our Purpose

Powering a bright future.

Our DNA

Safety is at the heart of what we do.

Trusted to deliver.

We unify and respond to challenges.

We embrace diversity and forward thinking.

We are our customers too.

TasNetworks
Delivering your power

Powering a bright future

Tasmania is already a global leader in renewable electricity. We have what most others want: abundant, good value, clean and reliable electricity that powers industry and the community.

Tasmania is building on these advantages. More renewable electricity can be generated in Tasmania, up to twice the amount we use ourselves. Tasmania has set a target of 200% renewable electricity by 2040. The electricity network facilitates getting these products to the market, both in Tasmania and to other regions of Australia. Shipping liquid hydrogen produced using renewable electricity is another way to access markets.

The world of energy is changing quickly as everyone moves towards cleaner forms of energy. Other things can change too – like the climate – and new things can emerge that change things in unexpected ways. Our society continues to adapt and evolve to meet such challenges. Community expectations are that industries and businesses are taking a lot more care about how they impact the environment and shape society. To meet these expectations, TasNetworks is aligning with the United Nations Sustainable Development Goals.

TasNetworks is the key link between electricity generators and electricity consumers. We sit at the heart of the energy system, running the electricity network safely and efficiently while enabling and accelerating progress towards Tasmania's energy future.

At TasNetworks, the decisions we take today about our electricity network and connecting customers can ensure a sound future.

We are looking ahead and have chosen 2030 as an important milestone in the transition towards our long-term future. For us, ten years is a relatively short timeframe when you consider that our assets can be in service for 40, 50 or even 80 years.

By 2030, Australia's renewable energy transition will be in full swing. Some of the large coal-fired electricity generation plants in our national market will have closed. The second electricity link between Tasmania and Victoria, called Marinus Link, is expected to be commissioned. Planning may be underway for a third and possibly a fourth electricity link.

New wind farms and pumped hydro electricity generation projects will be constructed in Tasmania. Tasmania and other regions of Australia could be exporting clean and green hydrogen fuel to countries around the world. People and businesses will continue to invest in photovoltaic solar and batteries to generate and store their own electricity and use it to power their homes, businesses and cars.

TasNetworks is preparing for this future now by laying the foundations. Our enduring focus is to deliver value to electricity consumers and create opportunities for Tasmania to generate and export renewable electricity.

Our Purpose

Our purpose says it all: Powering a bright future.

We are enabling the move to a more sustainable electricity system and ensuring the delivery of safe, reliable, and affordable electricity for all consumers. Tasmania is Australia's renewable energy powerhouse.

Success in 2030 looks like

- Sustainable prices for transmitting and distributing electricity.
- We are renowned for effectively managing and responding to challenges and risks that impact network services to customers and delivering solutions that are valued by customers.
- New wind farms, pumped hydro, photovoltaic solar electricity generators and batteries in Tasmania are reliably integrated into the electricity network.
- Marinus Link is moving electricity between the Tasmanian and other National Electricity Market electricity networks, benefiting customers across Australia.
- We are helping more Tasmanian consumers and businesses connect and utilise the electricity network the way they want, and to generate and manage their own electricity.

To guide our way in achieving our purpose, we have set out five focus areas for TasNetworks:

- **Safety**
- **Resilience**
- **Efficiency**
- **Renewable energy**
- **Growth**

Although the future is uncertain, these five areas are likely to be enduring and will guide TasNetworks' course towards 2030.

TasNetworks - the electricity network powering Tasmania's bright future.

2030

National Electricity Market (NEM) 2.0

Australia has one of the most decentralised electricity generation fleets in the world. Forecast is for more distributed generation, distributed storage, energy efficiency and demand response.

A new regulatory paradigm for a decarbonised and decentralised grid. Network operators will have new roles as integration of distributed energy resources become apparent.

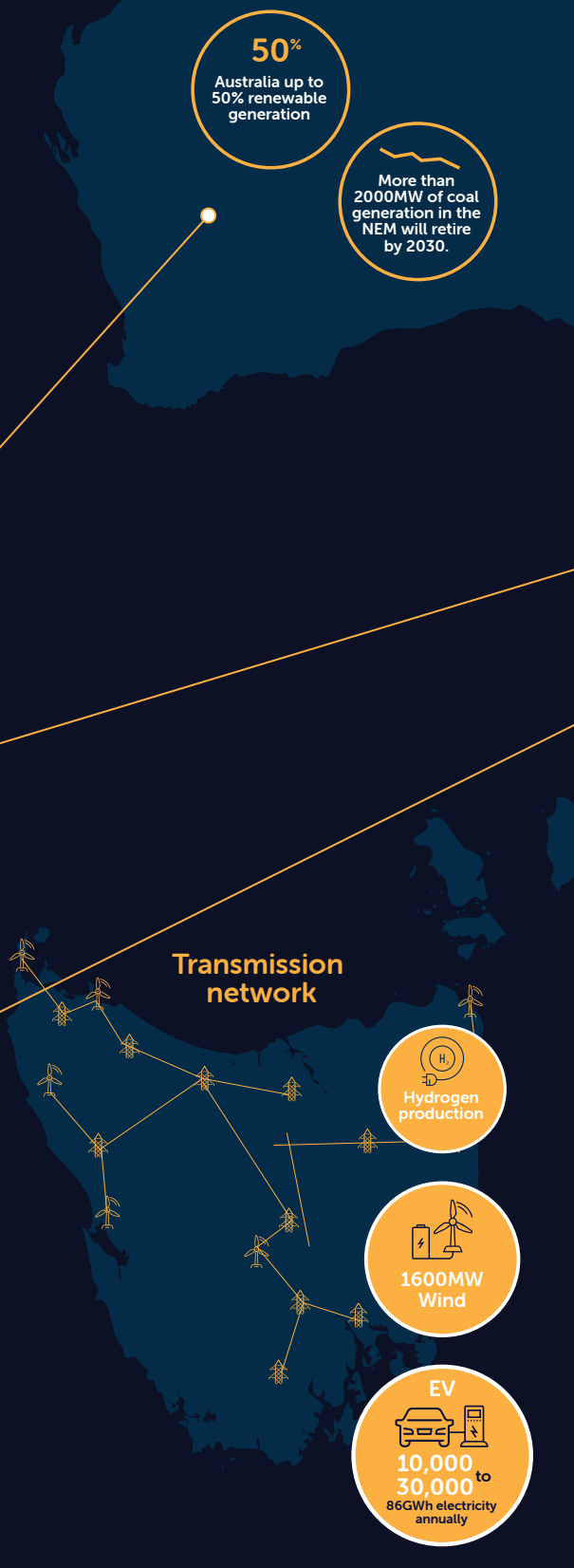
A fit for purpose market framework that supports reliability of the NEM and delivers more affordable energy and satisfied energy customers.

2000 MW

The first 750MW cable of Marinus Link operating, supporting the NEM with dispatchable electricity and the second 750 MW cable under construction. Pumped hydro 750 MW integrated with second stage of Marinus Link.

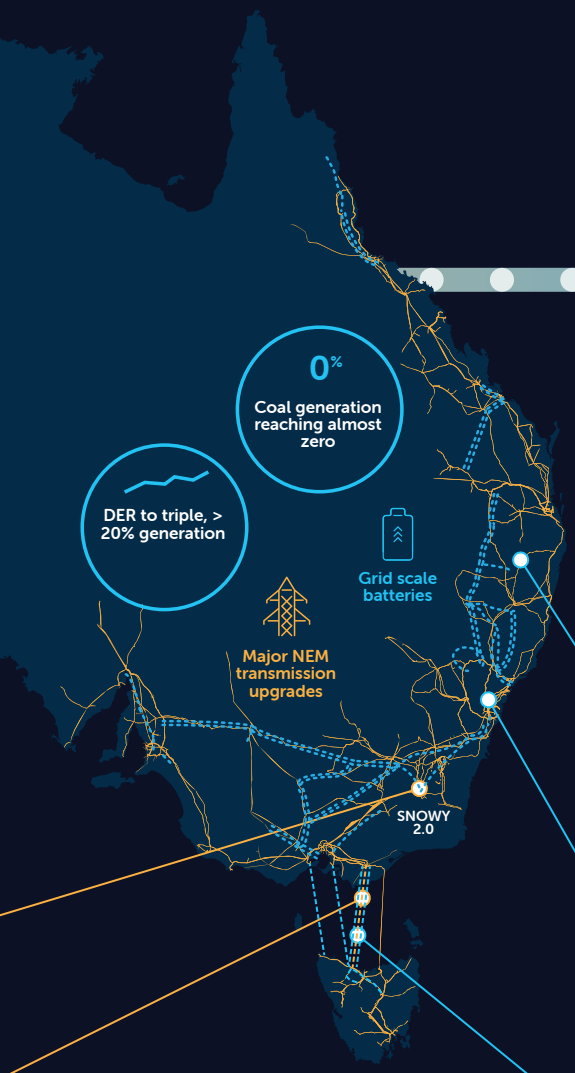
Network operations become more digital, with use of big data and data analytics, movement to new standards. Network operators will need highly developed digital capabilities for connections, grid operations and to serve customers.

Artificial intelligence used to optimise grid performance, reduce safety risks, optimising alternative solutions such as standalone power systems.



2050

National Electricity Market (NEM) 3.0



Real time balancing, reliability and quality of supply at small and large scale, with millions of market participants. Real-time transacting of energy in the NEM.

Battery storage at residential level widely deployed to serve as virtual power plants (VPPs).

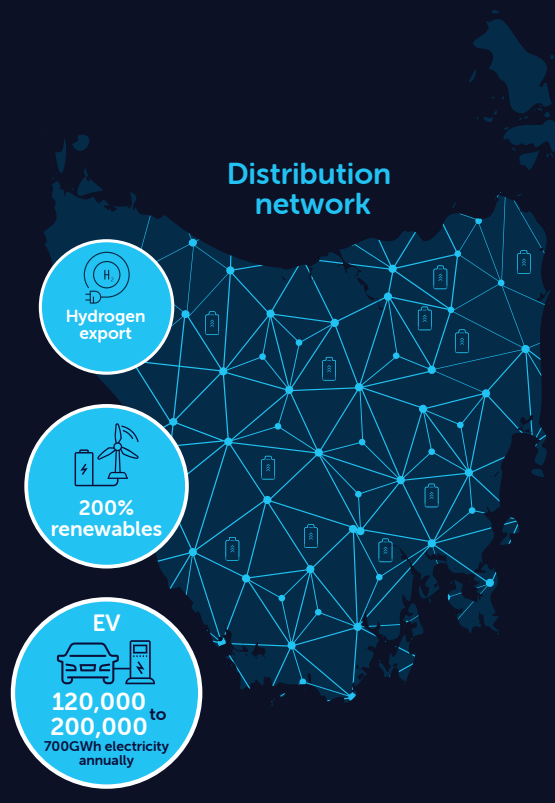
50%

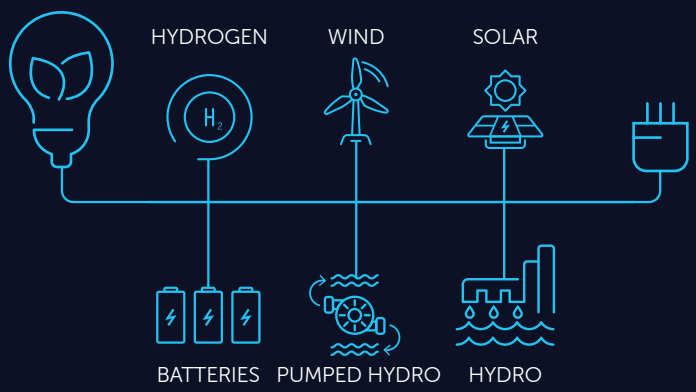
50% of all households and businesses in Australia have next-generation solar PV installed.

3000 MW

Multiple Tasmania – Victoria interconnectors. 3000 MW Battery of the Nation.

Superconductors, advanced digitalisation. Total orchestration of distributed energy resources.

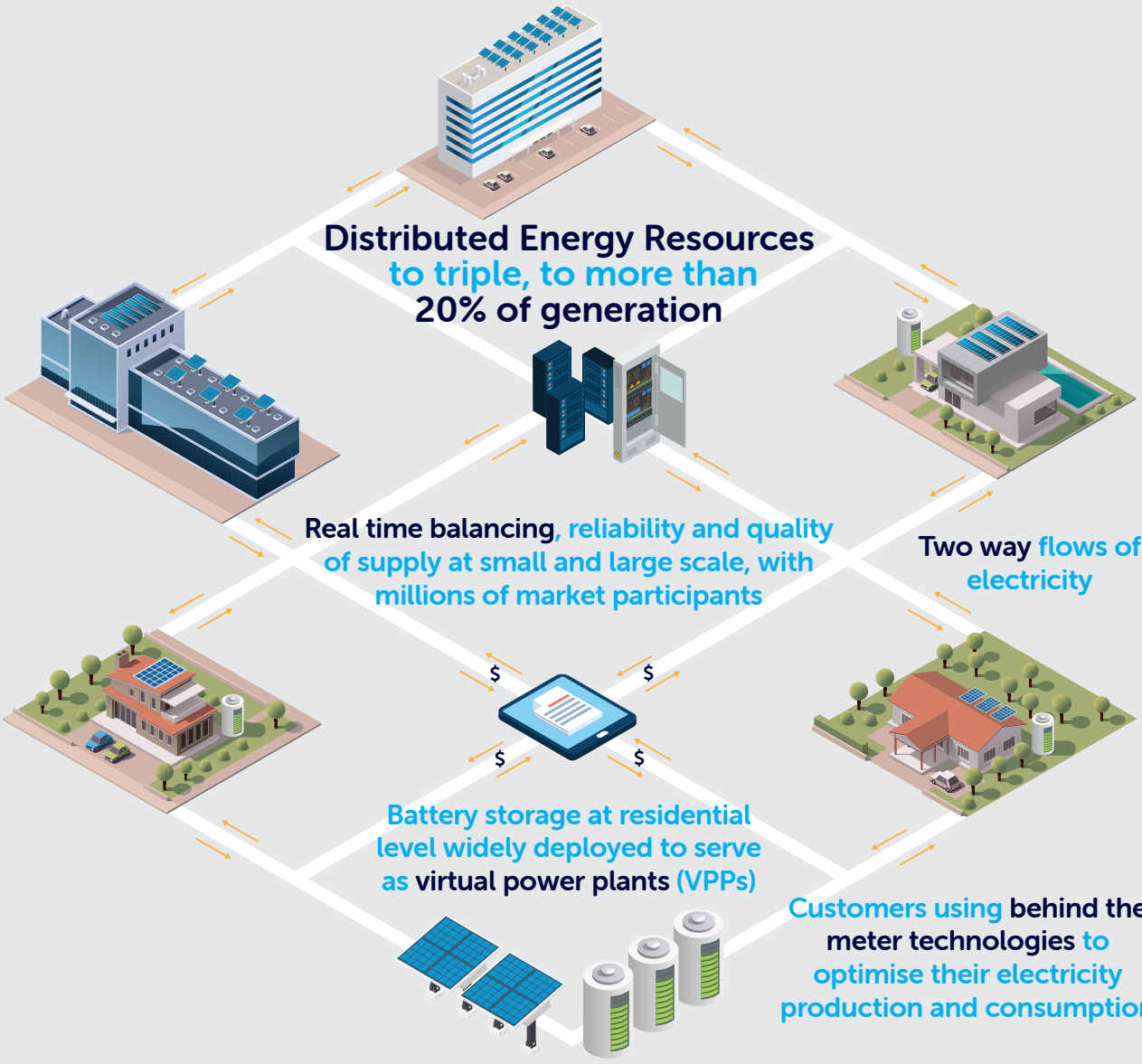




Hydrogen used widely in power generation (firming) as well as large transport methods. All electricity is zero or negative carbon.

Distribution Network 2050

50% of all households and businesses in Australia have next-generation solar PV installed



Improved storage technologies
Total orchestration of distributed energy resources

Towards 2030

Australia's electricity system is being transformed.

Fundamental change is occurring as coal-generated power plants are closing and are being replaced with dispersed solar, wind and hydro renewable energy.

More electricity generating assets are being connected to, and integrated into our electricity networks, influencing and challenging the dynamics of our networks.

The cost of technology is declining, and developments such as cheaper batteries is expected to result in more uptake by homes and businesses. We expect more electric vehicles on our roads. More interconnectors and grid scale battery storage is being developed to support the intermittent nature of renewable energy generation.

New technologies such as artificial intelligence and advanced data analytics are enabling better outcomes and changing ways of working, and driving innovation to deliver alternative network solutions.

Australia's electricity market and regulatory frameworks are constantly changing to attempt to deliver more affordable energy and satisfied electricity customers.

The design of Australia's electricity market is being reviewed and is expected to undergo further transformation by 2025.

Regulatory frameworks are being challenged to better enable the emerging decarbonised and decentralised electricity system. This is likely to lead to new roles and responsibilities of network operators such as TasNetworks.

We are influencing the fundamental change in the Australian electricity market, driving our operations to deliver more value to our customers and our shareholders, meeting government targets and delivering better outcomes for Tasmanians.

Safety of our people, the community and the environment

Growth at scale, in competitive energy services

Resilience of our network, our people and the community we serve

Renewable Energy Connecting new customers and progressing Marinus Link

Efficiency Achieve efficiencies and reinvest gains in innovation for customers and growth

Safety

1. Safety: of our people, the community and the environment.

Electricity is an amazing feature of our modern lives, but it is also a product that has to be used with care and responsibility.

At TasNetworks, we always strive to maintain the highest levels of safety in order to protect our people, our customers, the community and the environment.

Our customers are connecting more energy assets such as rooftop solar, batteries, electric vehicles and other energy devices to our grid, meaning that we will have to keep evolving our approach to safety.

The electricity network is affected by changes in the environment such as natural disasters and climate change. We have to mitigate the potential for our assets to start bushfires.

Our teams have to ensure the safe supply of electricity to customers under all sorts of circumstances.

We therefore have to continue to make safe and effective decisions amidst challenges and changes to the environment, including the ways in which we use electricity.

Safety is at the heart of who we are and what we do: it is in our DNA and underpins all our decisions and our actions.

We see ways to continually reduce safety risks over the next decade:

- Mitigating the safety challenges associated with our work.
- Continuing to foster a workplace culture that keeps our people, customers and community safe from electrical dangers, even amidst the most difficult conditions.
- Working with the community and owners of private electricity assets to be clear about account-abilities to safely manage vegetation and other maintenance activities.
- Using technology to increase the availability and timeliness of critical safety data, information and expert knowledge in the field.
- Investing in innovative technologies that enable us to eliminate or design out risks and remove our people from high-risk situations.
- Improving our risk management and operating procedures to continually reduce safety risks.
- Taking a leading role in community safety by developing safety partnerships and modern safety programs, including the education of Tasmanian students in schools.
- Implementing our threatened birds strategy and oil containment practices.
- Implementing a long-term climate change strategy to better manage the physical risks of climate change and mitigate our impacts like carbon emissions.
- Contributing to emissions reductions through the connection of more renewable energy.

Resilience

2. Resilience: of our network, our people and the community we serve.

Our world is experiencing dynamic and rapid change. Events such as bushfires, severe flooding and the global COVID-19 pandemic can leave our economy, communities and businesses in vulnerable positions.

Communities and businesses need to have the ability to adapt to these sudden changes and recover quickly from difficult or tumultuous events.

Electricity is an essential part of our everyday life. The way electricity is generated and used is changing. Customers value the availability of electricity most in times of crises. Providing electricity to our customers is our core business, and therefore it is our ultimate responsibility to provide electricity to our customers when they need it most.

Over the next decade, we see several ways through which we can keep building our resilience as a core competency.

We will focus on the resilience of three important elements: our people, our electricity network, and the communities we serve:

- Building the resilience of our people and lifting our capabilities so we continue to adapt to new circumstances.
- Nurturing and developing current and future leaders and cultivate a corporate culture that embraces and thrives on change.
- Ensuring our electricity network remains resilient and fit-for-purpose by proactively maintaining it, designing out risks, and making prudent investments of long-term value.
- Implementing innovative energy solutions that fit the needs of our communities and ensure the reliability of our network.
- Ensuring our distribution network can manage two way flows of electricity.
- Market support systems and processes will need to align with the changes to the NEM operating systems.
- Taking advantage of new technology such as advancement in automation, artificial intelligence, advanced data analytics and demand response services.
- Defining our future role as the network operator and implementing changes to meet the needs of our customers, and develop the required capabilities to meet this vision.
- Developing new business models that are fit-for-purpose and provide flexible electricity products and services to our customers.
- Developing our network vision and delivering on actionable roadmaps.
- Improving the resilience of our business by investing in prudent systems and processes, and deploying the right technology to allow us to make business decisions faster and safeguard our assets.
- Increasing our long-term financial resilience by developing clear, long-term investment plans.
- Working with communities to develop community-based electricity solutions.

Efficiency

3. Efficiency: Achieve efficiencies and reinvest gains in innovation for customers and growth.

Our future operating environment will likely be challenging and volatile.

Australia is amidst one of the greatest engineering challenges of all time. Coal electricity generation is being replaced by more intermittent renewable energy such as wind generation, large scale solar creating technical challenges on our transmission network.

As our customers connect more energy assets such as rooftop solar and batteries at their homes and businesses, so do the challenges on our distribution network increase.

The needs of our customers are changing in the way they prefer their electricity to be generated, consumed and managed. This means we will need to be innovative and to more actively manage our electricity network to serve customers.

Customers are also very clearly saying they want low prices for electricity. We have clear policy goals to ensure the affordability of electricity for all our customers even amidst all the challenges we may be facing.

The regulatory construct is tightening to reduce prices for customers whilst managing the transition.

This all means that over the next decade, we need to develop new ways of working, and achieve greater efficiencies in the way we manage our network and our business.

To deliver more value to our customers, we have important decisions to make in increasing our efficiency:

- To ensure our capital is used wisely, we will streamline our investment planning to achieve optimised investment strategies and have the best delivery model.
- Technology will be critical in enabling continued efficiency and business improvement.
- Harnessing the power of big data (e.g. data from advanced meters) and data analytics will drive objective investment decisions and optimise our business functions.
- We continually assess what value means to our customers to better serve all our stakeholders.
- Collectively, we take deliberate steps to enhance our organisational health, performance and efficiency in the workplace.
- Progressive leadership and an efficiency mindset that manifests in our strategy, culture, behaviours and commitments are important for us during this transition.
- Reinvesting the yield gained through improving organisational efficiencies will allow us to address critical areas of our business that are aligned to our long-term ambition.

Renewable Energy

4. Renewable Energy: Connecting new customers and progressing Marinus Link.

Tasmania has a rich legacy of harnessing renewable energy resources for over 100 years.

As a leader in renewable energy, Tasmania is ideally suited to support the renewable energy transition for Australia. With abundant sources of renewable energy, further development can provide firming capacity to other regions of Australia and new load opportunities in Tasmania, such as production of hydrogen.

Tasmania is also on a pathway to achieve a 200% renewable energy target by 2040.

This means more large scale wind and pumped hydro schemes located in Tasmania. Supporting transmission lines and substations in Tasmania will be required to complement these developments.

TasNetworks is working with governments and stakeholders to plan a new transmission link to Victoria, called Marinus Link. The completion of Marinus Link will enable a low-cost and reliable, dispatchable renewable energy supply to get where it is most needed.

Marinus Link is key in Tasmania's move as an exporter of firm supply of renewable energy. Marinus Link is the catalyst for investment in more wind power and new pumped hydro electricity generation.

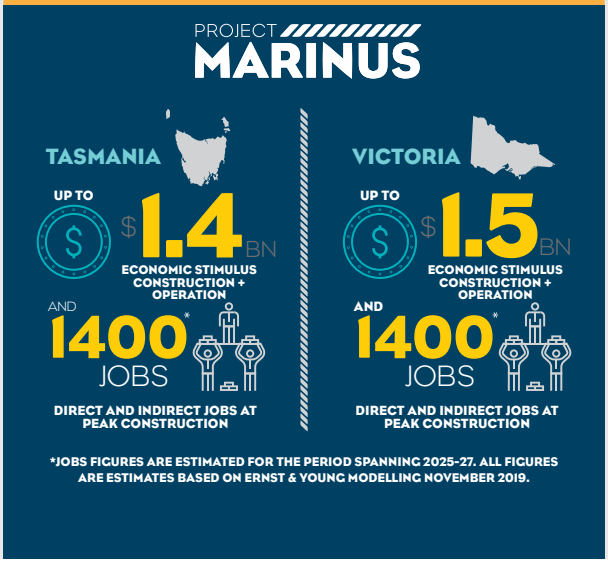
The identification of Tasmania's Renewable Energy Zones and the extensive pipeline for renewable energy investment opens up new opportunities for us to connect electricity generation in Tasmania.

We aim to be the preferred service provider for contestable connections required by new customers.

We will need to progress several strategic outcomes:

- We play a pivotal role as catalyst for Tasmania's renewable energy economy, by connecting new customers and supporting emergent industries such as hydrogen production on Tasmanian soil.
- We will enhance our processes and business capabilities to connect new large-scale renewable generation in Tasmania in a timely and skilful manner.
- Work with governments, the community and other stakeholders to progress the design and approvals for Marinus Link.
- Strategic planning of the network, including supporting transmission for Marinus Link.
- Network control schemes and technical capabilities to ensure the Tasmanian electricity system remains secure and reliable.
- Long-term solutions to address network complexities such as inertia and fault-level shortfalls.

Spotlight Initiative - Project Marinus



Growth

5. Growth: at scale, in competitive energy services.

Not only are the energy needs of our customers becoming more diverse, we are also experiencing significant change in the way our industry functions.

There are emerging opportunities to serve customers in new ways, especially as they invest in their own electricity resources to generate and consume electricity.

We can play a greater role in serving customers' needs that are complementary to our skills.

We aim to play a key role in connecting new large scale renewable electricity generators to the Tasmanian network.

There is also demand for other smart solutions that enable generators to access the network with fewer constraints.

As a contemporary energy utility, we are rethinking, redefining and redeveloping our future role in light of the current and emerging changes.

To continue to serve the needs of our customers to the best of our ability, we are considering new operating and business models.

Over the next decade we seek to grow our business to provide valued, contestable services to our customers:

- We engage with our customers, and continue to develop customer-centric approaches.
- Investment in research, development and innovation activities will allow us to develop products and services that provide further value to our customers.
- We diversify our revenue streams by capitalising on our expertise, emergent opportunities and the demand for new products. In that way, we will also increase our long-term sustainability and deliver more value to our stakeholders.
- Our competitive energy service offering will require competitive positioning within the Tasmanian market.
- We cultivate a competitive mindset across our business to capitalise on emerging opportunities in the Tasmanian market.
- We develop the capabilities and skills of our subsidiaries 42-24 and Large Scale Renewables to capture value with speed and agility.
- We harness the potential of our customers' energy resources and utilise it to the advantage of our network and our customers.
- Marinus Link will likely provide further optic fibre connectivity and opportunities in Tasmania.

Spotlight Initiative - 42-24

At 42-24, our vision is to be the first choice for trusted technology and energy solutions. Our business has been formed on a solid foundation of reliable and mission critical telecommunications, IT and Data Centre services. We are working to expand our service offerings and continue to provide innovative services in a rapidly changing and highly competitive market through the exploration of Internet of Things, cloud connection and other complementary services.

visit: **tasnetworks.com.au**

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