## RENEWABLE ENERGY INVESTMENT OPPORTUNITIES QUEENSLAND AUSTRALIA



**QUEENSLAND** ENERGY AND JOBS PLAN **Queensland** Government

Power for generations





# Queensland is renewables ready

There is no better time to invest in Queensland's renewable energy sector.

As leaders in Australia's energy transition, we are committed to forging partnerships with business to deliver a future green industry—part of global commitments to net zero carbon emissions by 2050.

We have a clear plan, backed by A\$19 billion to support enabling infrastucture, making it possible to manage Queensland's energy transition.

This, combined with our investment in solar, wind and hydrogen capacity, means renewables in Queensland are powering ahead.

Now is the time to get in on the ground floor of our renewable energy revolution.

# The Queensland advantage

- Queensland, a state of vast spaces and varied landscapes — seven times the size of Great Britain
- Custodian of the Great Barrier Reef one of the seven natural wonders of the world
- Trusted partners in approvals and connections



- Home to the Brisbane 2032 Olympic and Paralympic Games
- Lifestyle capital of Australia
- Significant deposits of key new economy minerals to drive renewable energy growth
- World-class infrastructure and ports
- Australia's gateway to key trading partners
- Stable and clear policy
- Both export and domestic demand
- Skilled workers, attractive labour market
- Expertise in key functions of mining and technical services
- High safety standards, and just dealings with Traditional Owners, an advantage in an environment, social and governance (ESG) conscious world
- Fastest growing economy in Australia, expanding rapidly and committed to a green energy future

## This is your opportunity to join our renewable energy revolution.







# Committed to a renewable economy

Queensland is perfect for investment in renewable energy generation.

We have among the world's highest levels of solar exposure, strong wind resources and significant land mass; creating great opportunities for large-scale renewable energy projects.

Our publicly owned energy transmission network transports vast amounts of power across long distances, over 2,000 km, from the southern border up to the far north.

In 2022, we released the A\$62 billion Queensland Energy and Jobs Plan—our pathway to energy system transformation. It sets out clear actions to provide confidence to investors and capital markets that Queensland means renewable business.

## Investor certainty

#### Funding to partner with private sector

Government capital investment of A\$19 billion over the next four years, provides confidence Queensland is powering ahead with renewable energy. A\$4.5 billion funding to partner with the private sector to build commercial renewable energy and hydrogen projects.

Through the Queensland Renewable Energy and Hydrogen Jobs Fund, government owned energy corporations can invest in renewable energy and hydrogen projects, support infrastructure and partner with private industry.

Our transmission provider is considered the most effective, agile and trusted in the nation.

#### Investment proposals are assessed on three key objectives

#### Renewable energy and hydrogen

Investment proposals that support additional renewable energy generation and storage capacity in Queensland, and the transition to Queensland's 50% Renewable Energy Target by 2030, will be considered. This includes, but is not limited to, solar, wind, batteries, hydrogen and supporting network infrastructure.



#### Commerciality

Investment proposals must demonstrate commercial value.

#### **Employment and jobs**

 Investments must create new and ongoing employment opportunities in Queensland consistent with the government's employment and procurement policies. The SuperGrid will open new Renewable Energy Zones (REZs) across Queensland and connect renewable generation with mining and industry.

#### Establishing Renewable Energy Zones

Twelve potential REZs have been identified across Queensland to connect 22 GW of large-scale wind and solar generation. As the green hydrogen sector grows, additional REZs may be added to support the renewable growth in Queensland.

The identified REZs are located in areas with high quality renewable resources and network capacity. Coordinated development will streamline the connection process for developers and achieve smaller overall network footprint and improved community outcomes. In a decarbonising global economy, Queensland will be an energy exporter of choice, with the REZs supporting the decarbonisation of Queensland industries.

## Building transmission infrastructure

The SuperGrid will include approximately 2,000 km of new backbone infrastructure to transport renewable energy across state. The SuperGrid will open new REZs across Queensland and connect renewable generation with mining and industry.



## Building large-scale firming and storage

Two world-class pumped hydro energy storage (PHES) projects currently in development, with a combined 7 GW generation capacity, will provide large-scale, long duration energy storage systems. Along with the SuperGrid, they will provide the critical backbone infrastructure of the new energy system.

#### Building community support

Investments will have the right social environment to succeed with policies and initiatives in place to support communities.

- A\$200 million program to support regional communities in seizing industry development opportunities presented by global decarbonisation.
- A toolkit for landholders to negotiate with developers about access and renewable projects on their land.
- A framework supporting communities and governments to work together ensuring people are at the centre of the energy transformation.

## Powering ahead

Queensland's renewable industry is expanding rapidly under our ambitious agenda to become a renewable energy superpower.

Since the release of the Queensland Energy and Jobs Plan in 2022, in just one year:

- clean energy supply has increased by more than 20%
- o.7 GW of variable renewable energy capacity has been added to the system
- more than 25% of the state's energy use is now powered by renewables
- A\$5.7 billion has been invested in the energy transformation.

## One in three homes are now powered by the sun.



## Across Queensland



### 54 wind farms

5 operational (1,013 MW) 4 under construction (1,626 MW) 45 proposed (32,000 MW)



#### **129** solar farms

40 operational (3,268 MW) 3 under construction (128 MW) 86 proposed (22,000 MW)



**50** renewable hydrogen and clean ammonia projects

### PHES and battery storage

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1 PHES and 2 batteries operating (720 MW) 1 PHES and 5 batteries committed (1,120 MW) Borumba and Pioneer-Burdekin PHES (7,000 MW) Other proposed storage (>8,000 MW)

#### Your opportunity to invest is now.

## Queensland investment opportunities

Significant renewable resources, abundant new economy minerals, world-class ports, long-standing trade partnerships and proximity to Asian markets mean Queensland is renewables ready.

Key advantages—such as a growing and resilient economy, a skilled workforce and innovative culture —make Queensland a destination of choice for the private sector to build ESG credentials. Queensland offers a range of investment opportunities including:

- renewable energy generation
- renewable energy manufacturing and infrastructure development
- renewable hydrogen.

# Renewable energy generation

We have an ambitious agenda for renewable growth and are working to facilitate investment that will move us towards our goal. Already several projects are happening across Queensland.

## Wambo Wind Farm – Cubico Sustainable Investments and Stanwell

Wambo Wind Farm is located in the Western Downs region of Queensland, approximately 260 km from Brisbane.

Stage one consists of 42 turbines and will generate 252 MW of clean energy. It is being delivered through a joint venture partnership between

government owned energy company Stanwell and global renewables company Cubico Sustainable Investments. Stanwell will own 50% of the wind farm and offtake the remaining 50% through a power purchase agreement.

Cubico Sustainable Investments is one of the world's largest privately owned renewable energy companies. Founded in May 2015, the company is backed by the resources of Ontario Teachers' Pension Plan, Canada's largest single-profession pension plan, and PSP Investments, one of Canada's largest pension investment managers. Cubico's global portfolio in 12 countries has an installed gross capacity of around 2.7 GW, with

400 MW in construction and over 2 GW under development.

Wambo Wind Farm represents a long-term investment opportunity for Cubico. For Stanwell, the project helps meet the Queensland Government's renewable energy targets and provides a pathway for workers employed in traditional coal-fired energy generation to gain skills and experience in the renewables sector.

Stanwell's stake in the project is backed by a A\$192.5 million investment from the Queensland Government's Renewable Energy and Hydrogen Jobs Fund.

Construction on Wambo Wind Farm stage one commenced in April 2023 and commercial operations are expected to commence in 2025. Stage two (up to 68 turbines) is under development and, if feasible, has the capacity to double the size of the wind farm to 500 MW.



## Kaban Wind Farm – Neoen

Located near Ravenshoe on the Atherton Tablelands, the 157 MW Kaban Green Power Hub Wind Farm is perfectly positioned to capitalise on the world-class wind resources of Northern Queensland. The project is being delivered by French developer, Neoen. The company is a leading owner and operator of renewables in Australia, and currently has a portfolio of 887 MW of renewable energy projects in operation or under construction in Queensland.

To support the project, the Queensland Government invested A\$40 million to upgrade the transmission lines in Far North Queensland and connect the project to Queensland's energy network. At its peak, the project supported around 350 jobs, including 97 jobs relating to the transmission network.

> Queensland's publicly owned energy generator, CleanCo, has an agreement to purchase 100% of the clean energy generated by the Kaban Green Power Hub. CleanCo will integrate the energy into its portfolio to provide reliable, clean energy for large commercial and industrial customers seeking to decarbonise.

Photo credit: Neoen With 28 turbines, the Kaban Wind Farm will generate an estimated 460,000 MWh of clean energy per year, enough to power up to 100,000 Queensland homes.

## Renewable energy manufacturing and industry development

Manufacturers and developers are coming to Queensland to decarbonise their supply chains and sustainably fuel their work.

Decarbonising Queensland's electricity network ensures input costs to industry are lowered and that our energy sources meet the requirements of increasingly ESG conscious investors and consumers.

We are actively strengthening our renewable energy supply chains to enhance green industry growth and trade.

Manufacturers are supported by:

- innovative supply chains
- access to critical minerals resources
- strong infrastructure networks.

Queensland provides cleaner, leaner pathways to key markets in Asia and the Pacific.

#### Manufacturing opportunities

- Wind and solar energy generation manufacturing and installation opportunities By 2035, approximately 12 GW of new large-scale wind and 10 GW of new large-scale solar is set to be developed in Queensland. This represents around 2,000 to 3,000 potential wind turbines and 36 million solar panels under the Queensland Energy and Jobs Plan.
- Battery componentry manufacturing and testing New household, community and utility-scale batteries will also be deployed across the state, and there is potential to capture benefits across the supply chain, from critical mineral extraction and refining, battery installation, and racking to battery pack assembly.



## Renewable hydrogen

Queensland is perfectly placed to support growth in worldwide demand for hydrogen which is projected to exceed 500 million tonnes by 2050.

Already an experienced energy exporter, Queensland has available land and water, abundant solar and wind resources, world-class port infrastructure and highly skilled workforces. Queensland is ready to be significant producer and exporter of renewable hydrogen to support global decarbonisation.

#### Hydrogen in Queensland

- Over 50 renewable hydrogen and ammonia projects progressing.
- A\$110 million for hydrogen industry development, committed to hydrogen skills and projects.
- A\$20 million in strategic technical studies and programs to secure social licence, reduce barriers of development and enhance the scaling and growth of industry.
- Focus on large-scale production and innovation in hard to abate industries.

Queensland is establishing foundations to enable a thriving industry, and leverage opportunities in the energy system, local manufacturing and industries associated with:

- green metals
- mobility
- heavy haulage and marine
- industrial manufacturing (fertilisers).

This includes a workable and effective legislative and regulatory environment, and an effective industry planning approach to leverage low-cost, reliable green hydrogen as an export fuel with multiple carriers being considered.



Find out more about Queensland's hydrogen production and export opportunities.





## Kogan Renewable Hydrogen Demonstration Plant – CS Energy

## With a A\$28.9 million funding allocation, government owned energy company CS Energy is developing the Kogan Renewable Hydrogen Demonstration Plant on Queensland's Western Downs.

Powered by behind-the-meter solar energy, the demonstration plant will produce up to 75,000 kg of hydrogen annually and help to decarbonise heavy transport by linking into Australia's Hydrogen Superhighway.

CS Energy will also export hydrogen to the Republic of Palau as part of a collaboration between Sojitz Corporation and Nippon Engineering Consultants. IHI Engineering Australia, a subsidiary of IHI Corporation Japan, is constructing the demonstration plant. Works began in mid-2023 and commissioning is scheduled for 2024.



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### Your opportunity to invest is now.



For more information about the Queensland Energy and Jobs Plan:

( ) epw.qld.gov.au/energyandjobsplan



For more information on investing in Queensland <u>tiq.qld.gov.au</u>

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• September <u>2023</u>