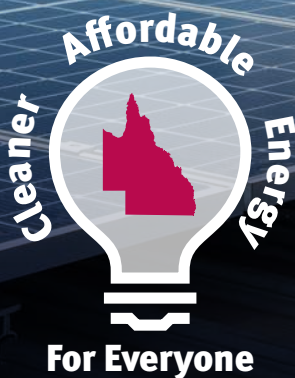


QUEENSLAND ENERGY AND JOBS PLAN

Power for **generations**

70%
Renewable Energy
by 2032



100,000 jobs

OVERVIEW | September 2022





“My Government has a long standing commitment of 50 per cent renewable energy by 2030, and now we are accelerating our progress. We are committing an extra \$4 billion to our energy transformation and setting two new renewable energy targets of 70 per cent renewable energy by 2032 and 80 per cent by 2035. We will showcase our clean energy credentials to the world as we prepare to deliver a climate positive Olympic and Paralympic Games in 2032.”

Anastacia Palaszczuk

Premier of Queensland and Minister for the Olympics



“Cleaner energy will enable exciting new industries like renewable hydrogen which could represent billions in exports and thousands of new clean energy jobs, mostly in our regions.”

Steven Miles

Deputy Premier, Minister for State Development, Infrastructure, Local Government and Planning and Minister Assisting the Premier on Olympics Infrastructure

“Through this Plan, we will keep public ownership of our energy system, with 100% ownership of transmission, 100% ownership of deep storage, and majority ownership of generation.”

Cameron Dick

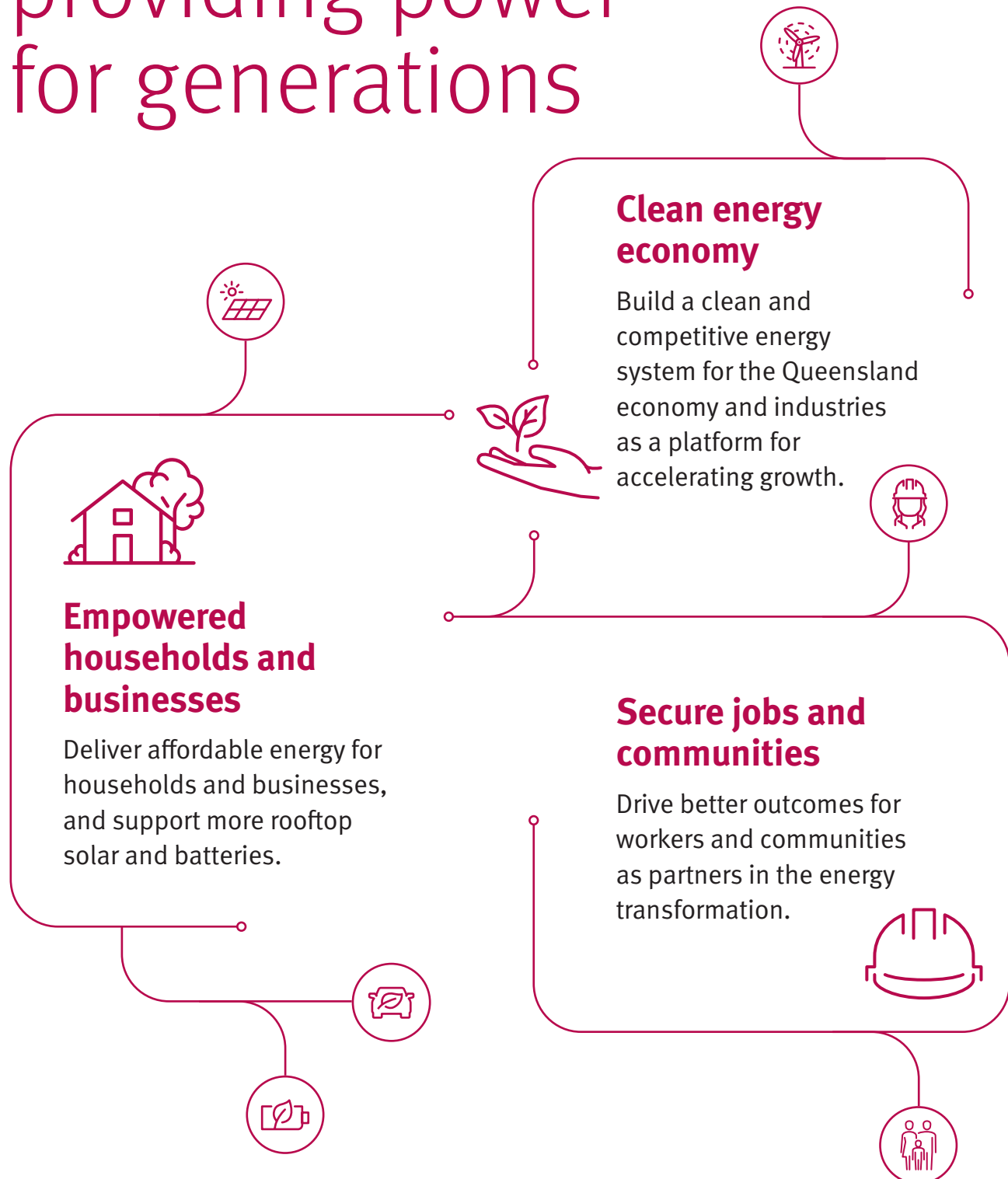
Treasurer and Minister for Trade and Investment

“This Plan will build the new ‘Queensland SuperGrid’ – the renewable energy, storage and network infrastructure we need to power our industries, businesses and homes.”

Mick de Brenni

Minister for Energy, Renewables and Hydrogen and Minister for Public Works and Procurement

Queensland's **SuperGrid** providing power for generations



A Plan to deliver

*More
jobs*

*More
industries*

*Affordable
power*

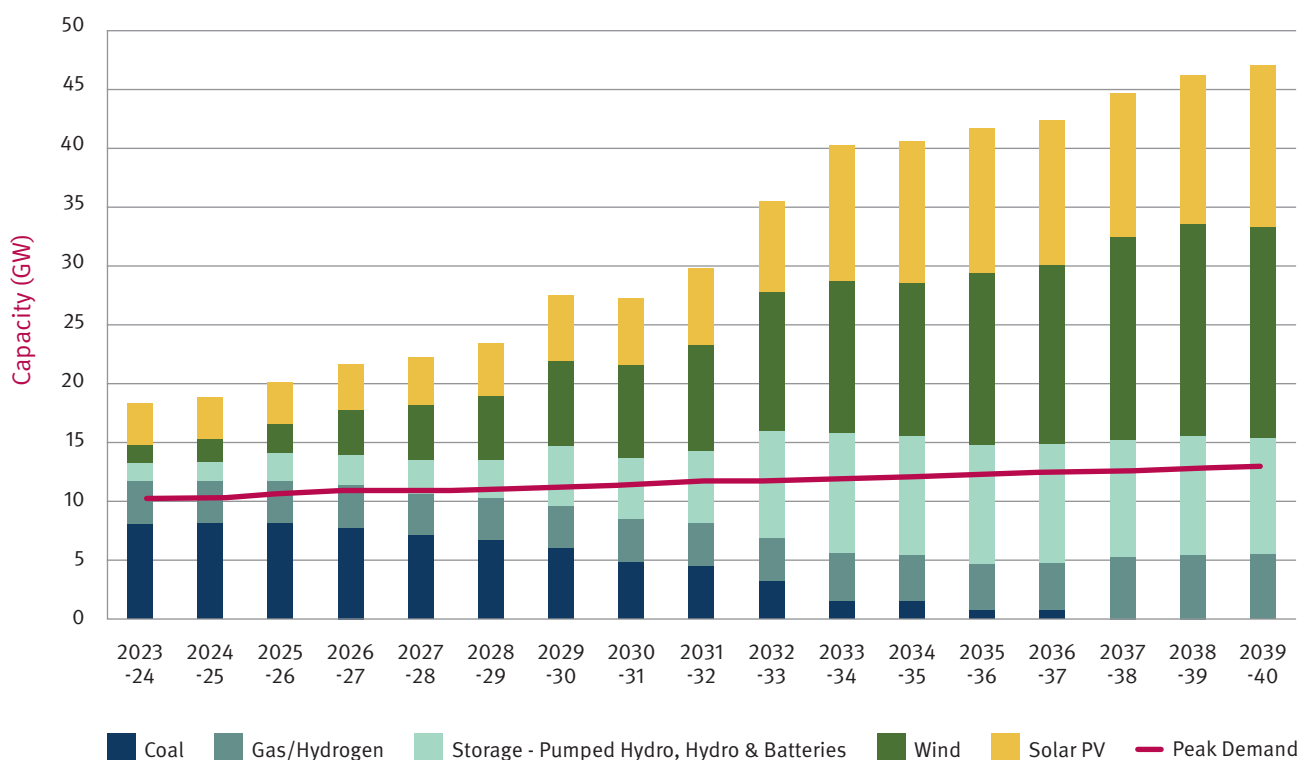
*Lower
emissions*

*Stronger
growth*



Queensland's SuperGrid will deliver clean, reliable and affordable power

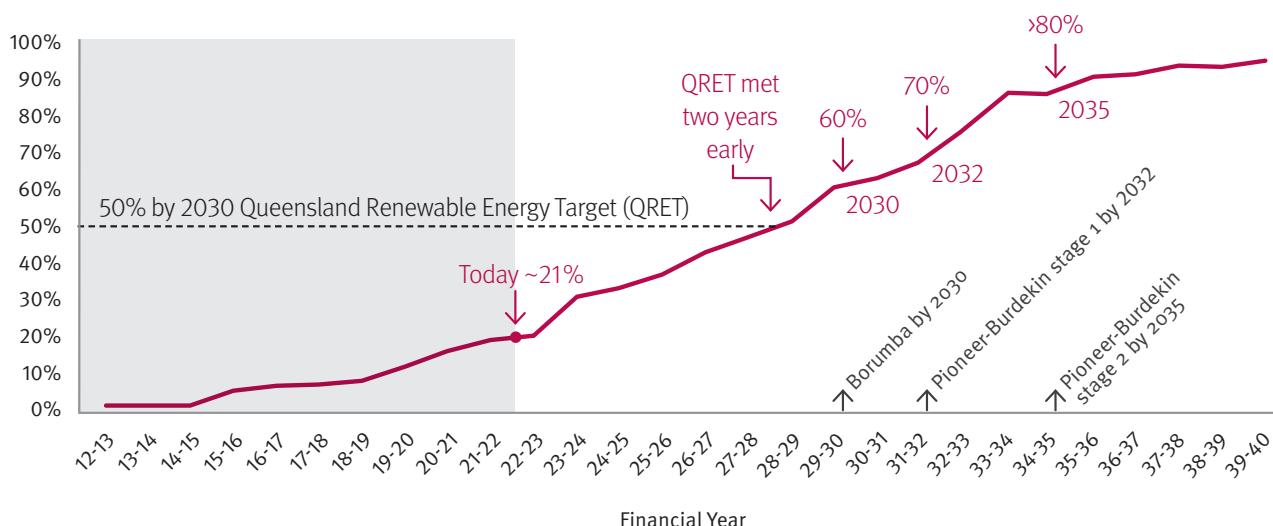
Queensland's generation mix will transform over time to include more wind, solar and storage to ensure we always have enough energy to meet Queensland's energy demand including at peak times.



Based on independent modelling

Under the Plan Queensland beats the 50 per cent renewable energy target

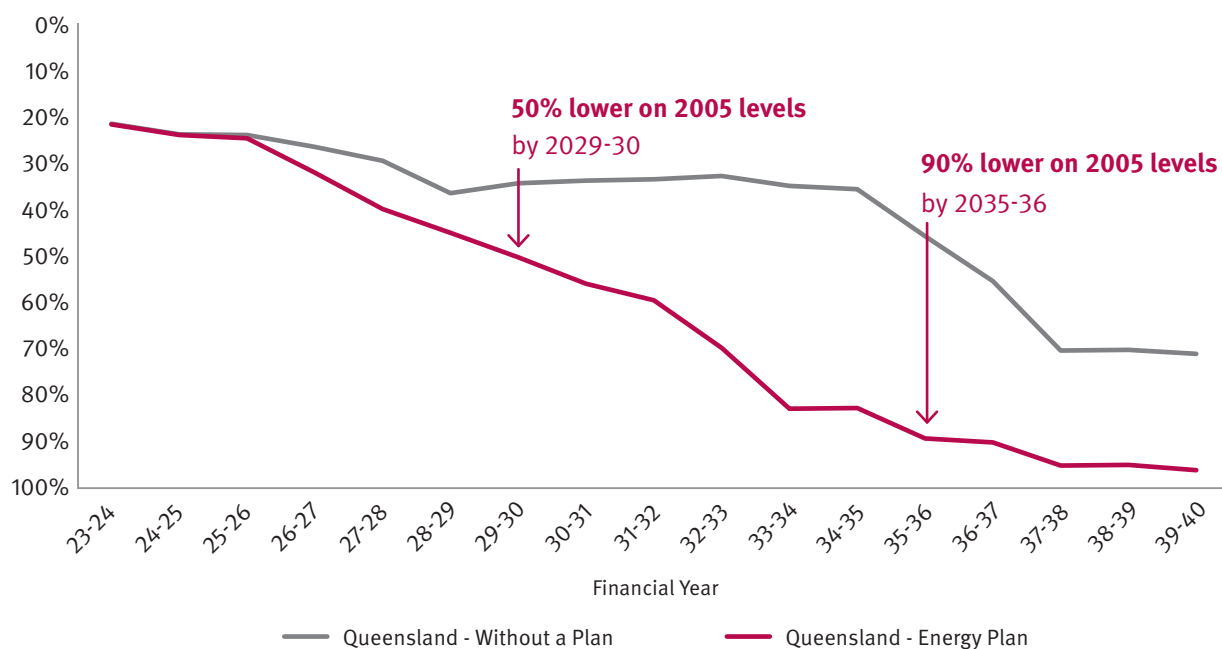
Renewable energy percentage under the Queensland Energy and Jobs Plan



And reduces electricity emissions

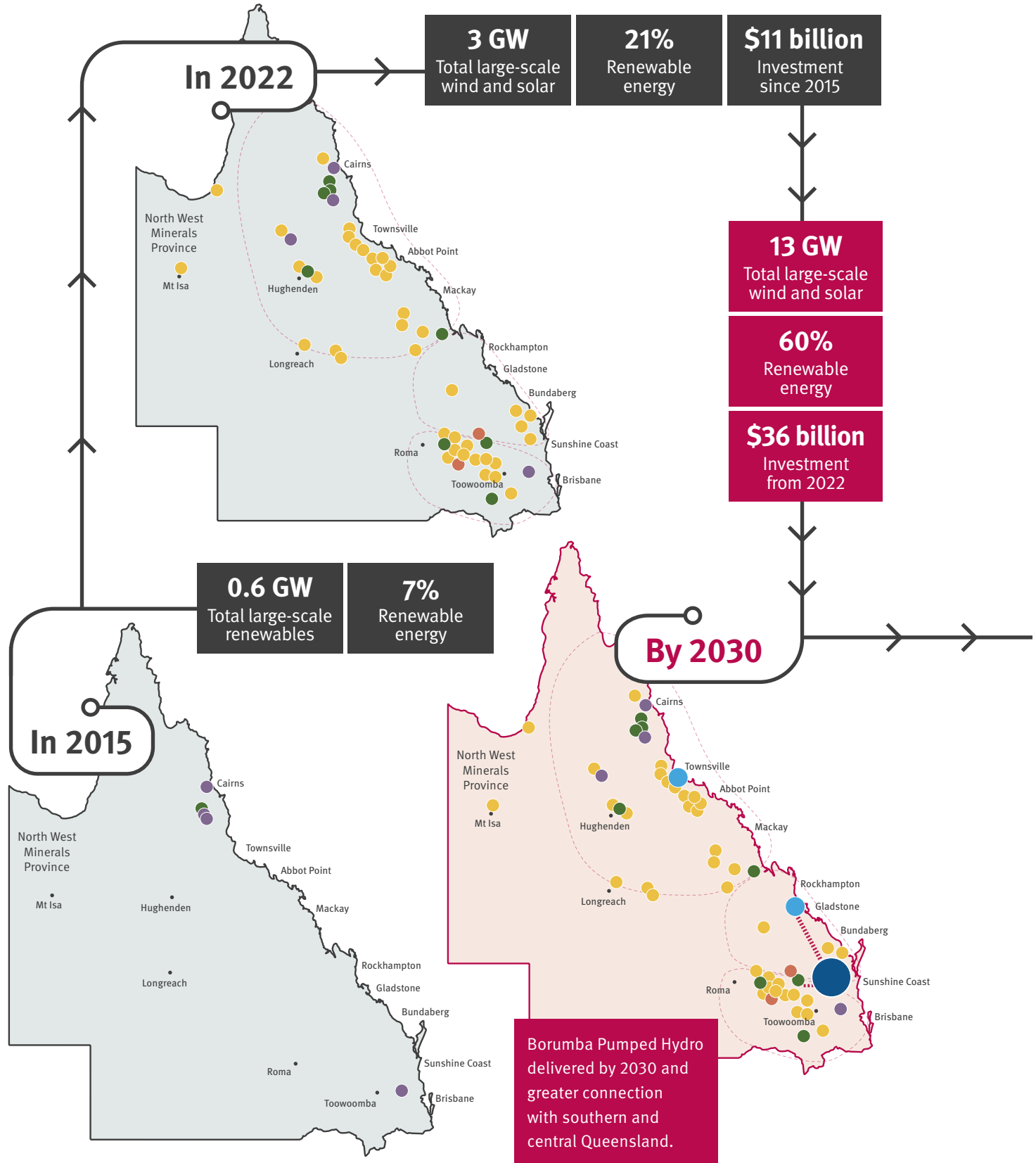
Lower electricity emissions – **90 per cent lower** by 2035-36

Electricity emissions (reduction on 2005 levels)



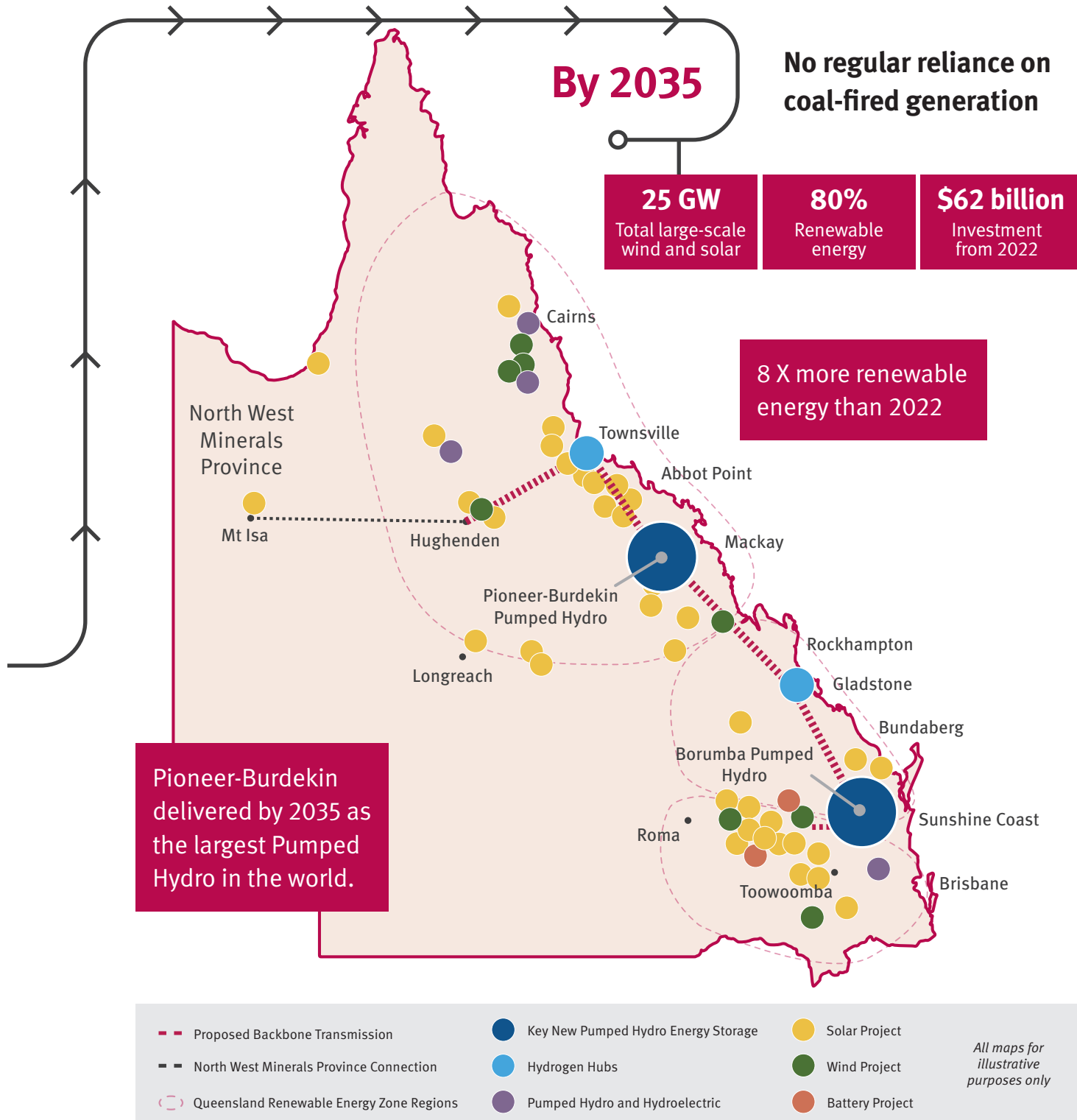
Based on independent modelling

Building the Queensland SuperGrid



What is the Queensland SuperGrid?

The SuperGrid is all of the elements in the electricity system, including the poles, wires, solar, wind and storage that will provide Queenslanders with clean, reliable and affordable power for generations.



The Queensland Government has outlined the optimal infrastructure pathway in the *Queensland SuperGrid Infrastructure Blueprint*.

Projections informed by independent modelling and internal analysis

This Plan represents an extra \$4 billion down payment on Queensland's energy transformation

\$2.5 billion boost

to the Queensland Renewable Energy and Hydrogen Jobs Fund to make it a **\$4.5 billion Fund**, including \$500 million for grid and community batteries, and a hydrogen-ready gas peaker

Queensland's energy system will remain **majority owned by the people of Queensland**

\$285 million to start building the SuperGrid and Powerlink to invest **\$365 million** for Central Qld Grid Reinforcement

25 GW wind and solar by 2035

\$20 million to supercharge future hydrogen hubs



64,000 jobs from building the SuperGrid including direct and indirect jobs by 2040*

36,000 more jobs by 2040 across key sectors of the economy than without a Plan including direct and indirect jobs*

\$150 million Job Security Guarantee and **\$90 million** for two new training hubs



Over \$270 million to progress two world-class Pumped Hydros

\$200 million Regional Economic Futures Fund

All publicly owned coal-fired power stations operating as clean energy hubs by 2035



Queensland's economy is **\$25.7 billion** bigger by 2040 than without a Plan*



New household savings programs to lower electricity bills



\$42 million for integrating electric vehicles



\$35 million for a business savings and transformation program

Wholesale electricity prices **15% lower** on average to 2040 than without a Plan*



Electricity emissions **50% lower by 2030** and 90% lower by 2035 on 2005 levels*

Household retail bills **\$150 lower in 2032** than without a Plan*



\$4 million to advance the bioenergy sector

Key sectors of the economy like **renewable hydrogen, manufacturing and new economy minerals** growing **faster** than without a Plan*

\$11.6 million to grow local supply chains and support manufacturers



**Based on independent modelling*





Clean energy economy

Actions

1.1: Begin building the SuperGrid

Begin building Queensland's SuperGrid with \$285 million to develop new backbone transmission that will connect more renewable energy and storage across the state.

1.2: Develop two world-class Pumped Hydros

Over \$270 million committed to progress the Pioneer-Burdekin Pumped Hydro near Mackay, which could be the world's largest, and the Borumba Pumped Hydro. Together, these projects could deliver up to 7 GW of long duration storage for Queensland.

1.3: Invest in more batteries and storage

The Queensland Government will invest \$500 million as part of the boosted Queensland Renewable Energy and Hydrogen Jobs Fund (QREHJF) for government-backed grid-scale and community batteries. The Government will also develop an energy storage strategy for a reliable and resilient system.

1.4: Build more renewable energy and connect an additional 22 GW by 2035

Boost the QREHJF to \$4.5 billion with an injection of \$2.5 billion from coal royalties. Powerlink will also invest \$365 million for grid upgrades in Central Queensland, and the Government will prepare legislation and a long-term roadmap on Queensland Renewable Energy Zones (QREZ) to connect 22 GW of renewables by 2035.

1.5: Ensure reliability with low to no emissions gas

Invest in a new 200 MW hydrogen-ready gas peaking power station at Kogan Creek and the delivery of new low to no emissions gas, including hydrogen, for Queensland's SuperGrid.

1.6: Grow the future renewable hydrogen industry

Commit \$20 million to supercharge Queensland's renewable hydrogen hubs, review the *Queensland Hydrogen Industry Strategy* in 2023 and investigate a potential new renewable hydrogen gas target.

1.7: Deliver sustainable liquid fuels

Deliver a fuels strategy that sets out the vision for developing and using sustainable liquid fuels to support decarbonisation.

1.8: Switch to renewable energy with new targets

Prepare legislation to establish the Government's renewable energy targets in law including, 50 per cent renewable energy by 2030, 70 per cent by 2032 and 80 per cent by 2035. The Government will also work towards 100 per cent renewable electricity for all large government sites by 2030.

1.9: Advance Queensland's bioenergy future

Invest \$4 million to advance Queensland's bioenergy future by working with industry to investigate options for expanding generation from biomass waste streams and support innovation.

1.10: Establish a new technical board for expert advice

Establish a new Queensland Energy System Advisory Board to provide technical advice to Government on the energy transformation, including advice on how to accelerate progress and ensure affordability, reliability and security is maintained. This will include providing advice on updates to the *Queensland SuperGrid Infrastructure Blueprint* every two years from 2025.



Empowered households and businesses

Actions

■ 2.1: Deliver a smarter grid that benefits all Queenslanders

Progress a range of initiatives to build a smarter grid and effectively integrate customer energy resources such as rooftop solar, home batteries and electric vehicles to ensure businesses and households can get the most out of their investments.

■ 2.2: Deliver a new household program

The Government will establish a new program to support households to manage their energy use and save on electricity bills.

■ 2.3: Support to reduce household bills

Support trusted non-government organisations with \$10 million in funding to improve access to energy efficiency advice and devices for hard to reach customer cohorts, like those experiencing vulnerability, to help them manage their energy use and reduce electricity bills.

■ 2.4: Drive savings for small businesses

Establish a new \$35 million Queensland Business Energy Saving and Transformation (QBEST) program to help businesses save money on their electricity bills.

■ 2.5: Integrate Queensland's zero emissions vehicles

Invest \$42 million to deliver charging infrastructure and trials to support efficient integration of electric vehicles into the grid.

■ 2.6: Enable savings for commercial buildings with Environmental Upgrade Agreements

Enable the use of Environmental Upgrade Agreements to deliver energy savings for commercial business owners and tenants, including ensuring the right regulatory environment is in place.

■ 2.7: Ensure affordable electricity in regional and south east Queensland

Continue to implement the Uniform Tariff Policy to ensure all Queenslanders pay a similar price for electricity no matter where they live, for 2022–23 this represents \$638.5 million in the State Budget. The Government will also keep prices affordable in south east Queensland with a review of the regulatory market, new initiatives to reduce electricity bills and supporting more rooftop solar.



Secure jobs and communities

Actions

■ 3.1: Invest to modernise Queensland's publicly owned coal-fired power stations for the future

Queensland's publicly owned coal-fired power stations will continue to play a vital role in the energy system, with Government reserving back-up capacity, repurposing critical infrastructure and reinvesting into these sites as clean energy hubs, supported by the \$4.5 billion QREHJF. All publicly owned coal-fired power stations will be operating as clean energy hubs by 2035.

■ 3.2: Support workers with a Job Security Guarantee

A new \$150 million Job Security Guarantee, backed by a fund and an *Energy Workers' Charter*, will support workers in publicly owned coal-fired power stations by guaranteeing opportunities to continue their careers within these energy businesses or pursue other career pathways.

■ 3.3: Prepare Queensland's workforce and regions for growth

Develop a *Future Energy Workforce Roadmap* during 2023 and invest \$90 million to establish two new regional transmission and training hubs. The Government will also establish a new Energy Industry Council and a Queensland Renewable Energy Jobs Advocate to provide advice on the future skills, opportunities and training pathways required.

■ 3.4: Grow the renewable energy supply chain in Queensland

Invest \$11.6 million to help build capacity in the Queensland manufacturing sector, and deliver a grant program that supports up to 400 manufacturers to increase their competitiveness in a low carbon future.

■ 3.5: Clean energy for remote and First Nations communities

Work to reduce emissions in remote and First Nations communities with a \$10 million Queensland Microgrid Pilot Fund to improve network resilience. The Government will also co-design a clean energy strategy with First Nations communities to achieve net zero electricity emissions in communities supported by Energy Queensland power stations.

■ 3.6: Partner with industries and communities to maximise benefits from the energy transformation and drive regional economic opportunities

Deliver real and lasting benefits for regional communities through a new \$200 million *Regional Economic Futures Fund* to support economic and community development initiatives and a new *Regional Energy Transformation Partnerships Framework* with \$35 million for strategic planning and community engagement activities.



Learn more about the Plan



During 2023 the Queensland Government will be consulting on key initiatives in this Plan.

**To learn more about the Queensland Energy and Jobs Plan and how you can get involved, check out the website:
qld.gov.au/energyandjobsplan**

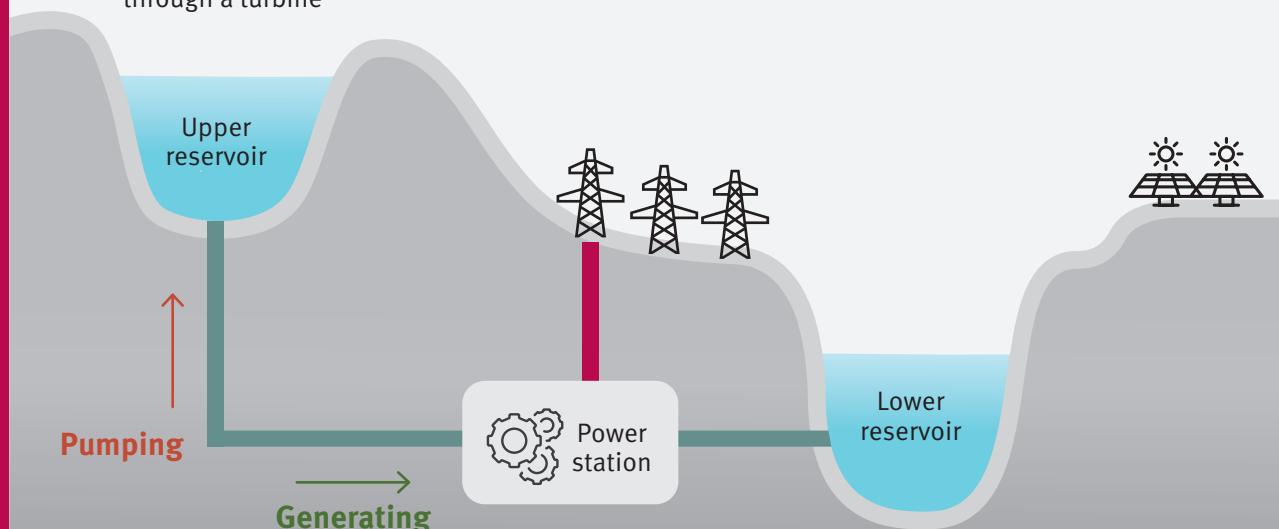
How does Pumped Hydro work?

Pumped Hydro acts like a giant battery:

- it uses electricity from the grid or nearby renewables to pump water from a lower reservoir into an upper reservoir when energy prices are low
- when energy is needed, water is released from the upper reservoir into the lower reservoir, generating energy as it passes through a turbine

■ hydroelectricity can be generated almost immediately and at any time, so power can be fed into the grid when it is needed.

- ✓ **Drives reliable power for a clean energy economy**
- ✓ **Stores renewable energy like solar and wind**
- ✓ **Provides on demand power when we need it**



Two sites in Queensland

■ Borumba close to both central and southern Queensland

■ Pioneer-Burdekin the battery of the north – the largest in the world



Megawatt (MW) and Gigawatt (GW):

A measure of output from a generator (1000 MW = 1 GW this is enough to power around 300,000 homes).



Dispatchable generation: Sources of electricity that can be switched on and off and ramp their power output up and down based on market needs.



Demand: The amount of power consumed at any time.



Renewable energy: Energy that comes from renewable sources, such as sun and wind.



Electricity grid: Often referred to as 'the grid', this includes the transmission and distribution networks that carry electricity from generators to energy users.



Hydrogen: A clean, renewable fuel that can be used in transport, power supply and a range of industrial processes.

QUEENSLAND ENERGY AND JOBS PLAN

Power for **generations**



qld.gov.au/energyandjobsplan



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2022