

# Changing Energy Market

Australia's energy market is in transition.

Clean, renewable sources of energy are being harnessed to meet growing electricity demand and reduce carbon emissions to mitigate the impacts of climate change.

Whole-of-system planning for the National Electricity Market (NEM) is managed by the Australian Energy Market Operator (AEMO) and outlined in its Integrated System Plan (ISP), which is updated every two years.

The ISP's objective is to: *maximise value to end consumers by designing the lowest cost, secure and reliable energy system capable of meeting any emissions trajectory determined by policy makers at an acceptable level of risk.*

In December 2023 AEMO published its Draft 2024 ISP. It reports that under the most likely *Step Change* scenario coal fired generation is predicted to exit the NEM completely by 2038 and Australia will require 6 gigawatts (GW) of new renewable energy generation each year for the next decade. It predicts that by 2030 Australia will need to triple its amount of grid-scale variable renewable energy generation (wind and solar) to 57 GW and require a six-fold increase in battery storage to 19 GW.

The Australian Government has set a national target of 82% electricity from renewables in the NEM by 2030. In September 2022 the Queensland Government released its *Queensland Energy and Jobs Plan* with updated renewable energy targets for the state of 50% by 2030, 70% by 2032 and 80% by 2035 including 25 GW new large-scale wind and solar – and net zero by 2050. In 2023 27% of Queensland's energy supply was generated from renewable sources.

The *Climate Change Act 2022* has legislated a national emissions reduction target of 43% (compared to 2005 levels) by 2030 and in February 2024 the Queensland Government introduced the *Clean Economy Jobs Bill 2024* to state parliament, to legislate an emissions reduction target of 75% by 2035.

*"The launch of the Queensland Energy and Jobs Plan (the plan) was a landmark moment in the state's history as we committed to transform our energy sector and power more jobs across the state. Thanks to the skill and ambition of Queenslanders, we have taken significant steps to deliver on our commitment in the first year since the plan's launch.*

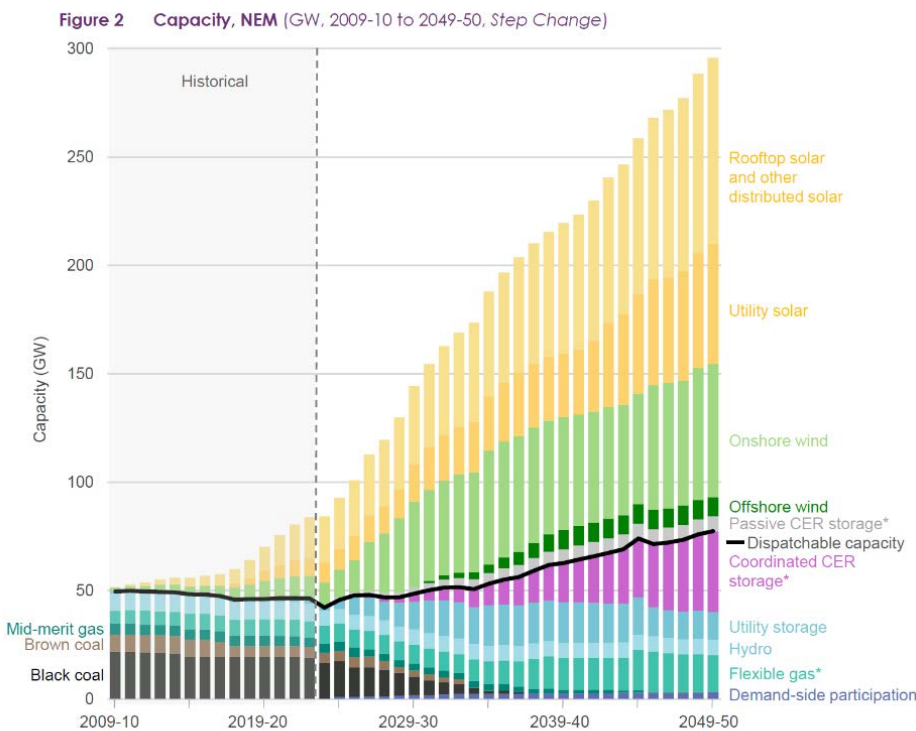
*With 27 per cent renewable energy supply now in Queensland, we are on schedule to reach our first renewable energy target of 50 per cent by 2030. Clean energy supply is set to grow even more, with more generation and storage to commence operations over the next 12 months and beyond.*

*This investment in renewable energy projects also translates to long-term job opportunities for our regions... Training our next generation of workers will ensure we build the capability and capacity locally to support the transition and become a world leader in renewable energy."*

**Mick de Brenni MP**

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

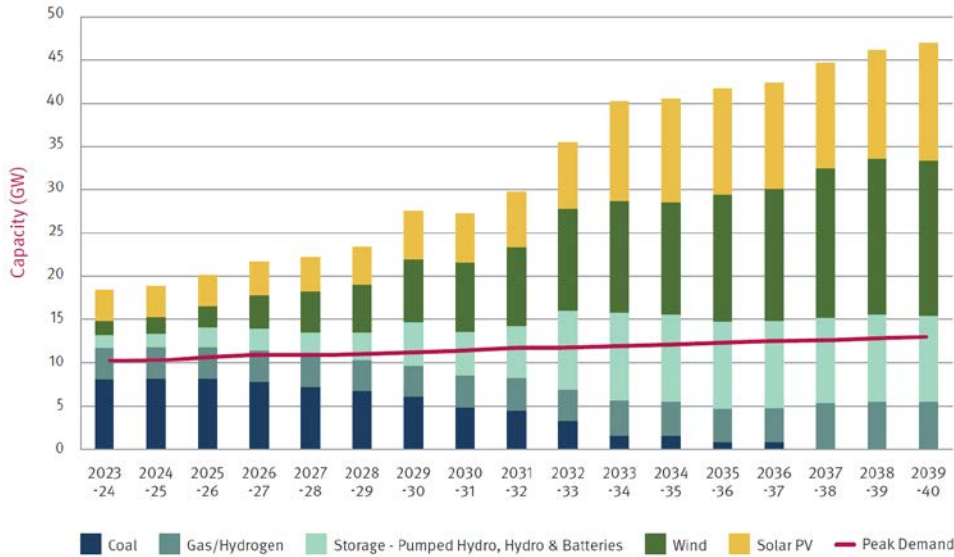
*From Foreword, Queensland Energy and Jobs Plan, 2023 Update, November 2023*



Source: AEMO, Draft 2024 Integrated System Plan, December 2023



## Proposed transition of Queensland's energy market, 2023-2040.



Based on independent modelling

Source: Queensland Energy and Jobs Plan, 2022

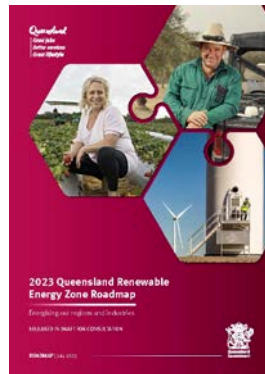
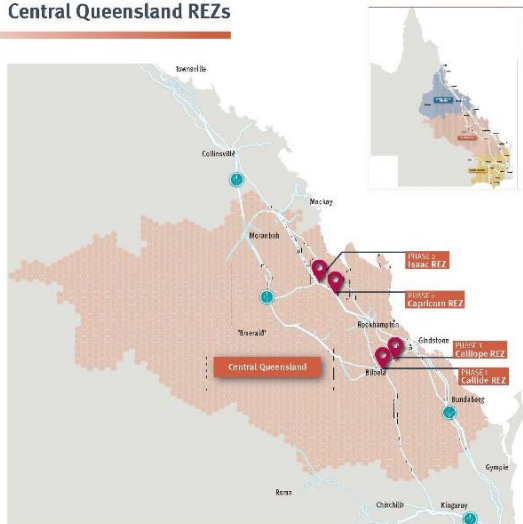
Achieving Australia's and Queensland's emissions reduction and renewable energy targets will require harnessing Queensland's renewable energy potential as quickly as possible.

The Queensland Government's \$60 billion *Queensland Energy and Jobs Plan* has committed to establishing Renewable Energy Zones (REZs) in areas of high renewable potential through strategic network investments, streamlining the development of new projects, and maximising benefits for local communities.

A REZ is an area with strong wind and sun that is developed in a coordinated way to lower costs and improve local community, environmental, and cultural heritage outcomes.

The *Queensland Renewable Energy Zone Roadmap* is in development and identifies the Central Queensland region from Moranbah in the north to Bundaberg in the south, and west past Emerald – with four potential REZs.

### Central Queensland REZs



Source: 2023 *Queensland Renewable Energy Zone Roadmap*. Released in draft for consultation, July 2023



Scan QR codes for more information

2024 Integrated System Plan, Australian Energy Market Operator (web page)



National Electricity Market Fact Sheet, AEMO (PDF)



Clean Energy Australia Report 2023, Clean Energy Council (PDF)



Queensland Government Department of Energy and Climate - Energy (web page)



Queensland Energy and Jobs Plan - Overview (PDF)



Queensland Energy and Jobs Plan - 2023 Update (PDF)



2023 Queensland Renewable Energy Zone Roadmap, Draft for consultation, July 2023 (PDF)

