Northern QREZ

Frequently Asked Questions

Q. What is a renewable energy zone (REZ)?

Areas with high quality renewable resources like wind and solar, can be developed in a coordinated way to form a Renewable Energy Zone (REZ).

Coordinated development of a REZ means multiple generators can be connected in a cost-effective way. This supports an optimal generation mix in Queensland that can benefit existing and emerging industries and local communities.

The Queensland Government has committed $145 million to establish three Queensland renewable energy zones (QREZ) in southern, central, and northern Queensland to foster jobs and growth as part of economic recovery and help Queensland reach 50 per cent renewables by 2030.

Q. Why does Queensland need renewable energy zones?

The Queensland renewable energy sector has grown rapidly since 2015. This investment boom has delivered employment and infrastructure outcomes into mostly regional areas of Queensland. However, new challenges have emerged for renewable developers in managing risks like congestion and the reduction of energy output.

Investment in the network can be coordinated to unlock areas of high investor interest in an efficient way, reducing the total system cost and driving downward pressure on electricity prices.

Q. Where is the Northern Queensland Renewable Energy Zone (QREZ)?

The Northern QREZ groups together a number of areas identified by the Australian Energy Market Operator as having good potential for renewable energy, spanning from Far North Queensland down to Mackay and as far west as Barcaldine.

Long-term development of this region will be complex and aligned to energy needs as the system integrates more renewable energy to achieve 50 per cent renewables by 2030 and net zero emissions by 2050.

The Northern QREZ has excellent renewable potential but limited capacity to support the connection of new projects. In the first stage of development, the Queensland Government has identified network upgrades south of Cairns that will improve the security of energy supply to Cairns and unlock up to 500 megawatts of new renewable energy capacity in Far North Queensland. This will allow new projects to tap into the world-class wind energy resources in the region.

Q. What will be the impact on energy prices and electricity bills?

Development of QREZ will help make Queensland's high quality renewable energy resources available in an efficient and coordinated way. By coordinating development in areas of high renewable potential, we can support cost-effective, grid-connected renewable energy and keep downward pressure on electricity prices.

Queensland Government

Q. What will the $40 million investment by the Queensland Government deliver?

The Queensland Government has committed $40 million towards transmission upgrades in the Northern QREZ. These upgrades will be undertaken by the state-owned transmission network service provider Powerlink.
This investment will:

- upgrade the existing transmission line between Cairns and Townsville from 132 kilovolts to 275 kilovolts
- deliver greater security of supply to Cairns, making the region's network more resilient to cyclones, storms and lightning strikes
- support up to 500 megawatts of additional generation capacity to be connected to the grid, starting with Neoen Australia's 157 megawatt Kaban Green Power Hub wind farm, worth over $370 million and delivering a total of 250 construction jobs through transmission upgrades and windfarm construction.

Q. How many jobs are expected to be generated from the Northern QREZ?

In addition to the Kaban project, the Northern QREZ could support approximately 300 to 700 renewable construction jobs over the medium-term, as renewable projects connect, utilising the unlocked network capacity.

The ultimate number of jobs will be dependent on the design and scale of the renewable projects developed. This will be firmed up as proponents progress feasibility, design and approval activities in coming years.

In addition, many indirect local jobs are expected to flow through to communities as businesses are called upon to support both the initial construction phase and ongoing project needs.

Q. Are there any benefits for local communities?

Development of QREZs will deliver investment into local communities, as well as employment, energy and infrastructure outcomes.

Long-term development of QREZs are focused on delivering community benefits and a lasting legacy of opportunity for local communities. Stakeholder engagement throughout 2021 will focus on understanding what benefits are important to local communities and how these can be maximised through QREZ development now and into the future.

Kaban Green Power Hub

Q. What is the Kaban Green Power Hub?

The Kaban Green Power Hub is a renewable energy project located near Ravenshoe in Far North Queensland, being undertaken by renewable energy developer Neoen Australia. It consists of a 157 megawatt wind farm and also has approval for a 100 megawatt battery.

Further project information is available at the Kaban Green Power Hub website.

Q. Who approved the Kaban Green Power Hub?

The Kaban Green Power Hub was initially granted development approval by the Queensland Department of State Development, Manufacturing, Infrastructure and Planning in 2018.

Neoen has engaged with the local community and kept stakeholders informed and involved as they progress the project. This included community drop-in sessions and information campaigns, the distribution of relevant notices required by the planning and approvals process, and development of a 30 per cent local employment target.

Q. How big will the Kaban wind farm be?

The 28 wind turbines at Kaban will be 226 metres in height to the tip of the blade, capturing stronger winds at the higher altitude. Technological advances mean turbines are now larger and more efficient, with fewer required to produce the same amount of energy and an overall smaller project footprint.

Q. How much will the project cost?

The entire wind farm project is expected to cost $373 million.

Q. How many jobs will the wind farm and transmission infrastructure upgrades create?

It is expected that 250 direct jobs will be created during construction and five permanent positions. This figure includes construction jobs generated by the wind farm and the associated upgrade of transmission infrastructure which will be delivered by Powerlink.

Q. How will this project benefit Queenslanders?

As we move towards our 50 per cent renewable energy target by 2030 we need a variety of energy sources, coupled with network upgrades and firming infrastructure, to ensure we continue to maintain secure, reliable and affordable energy supply.

Wind energy will be increasingly important because it can generate at times when other renewable energy sources, like solar, are ramping down. Far North Queensland's wind energy resources are some of Australia's best.

The project also has a comprehensive community benefit sharing plan to support local skills development and Indigenous communities:

- A Local Participation Plan has been developed with a target of 30 per cent local employment and supply chain procurement
- A comprehensive Indigenous Engagement Strategy co-designed with the Jirrbal Traditional Owners
- A Community Benefit Fund: providing support for local community initiatives through a $50,000 annual Kaban Green Power Hub Community Benefit Fund
- Supporting agriculture: providing diversified income streams to farmers who are involved in the project as host landholders

Q. What are the land impacts of the Kaban wind farm?

The project will be installed across four freehold rural properties that total approximately 1,330 hectares. However, the final operational project footprint is anticipated to be approximately 150 hectares.

The site was chosen due to its excellent wind resource, proximity to transmission lines and limited visual impact, being surrounded on three sides by State Forest.

Q. What are the wider environmental impacts of the Kaban wind farm?

The project has been assessed and approved by the State Assessment and Referral Agency in accordance with the wind farm state code, which takes into account an assessment of aviation impacts, noise emissions, environmental and visual impacts, and the safe and efficient operation of local transport networks and road infrastructure.

The project has been subject to a detailed ecological assessment and has environmental offset arrangements.

Wind farm impacts

Q. How are the potential impacts of wind turbines considered?

Wind farm development proposals are assessed against the wind farm state code. This state code was developed based on expert technical advice, national and international best practice, and engagement with the community and key stakeholders. Assessment of wind farms against the state code ensures proposals are assessed in a consistent, coordinated way.

The code requires that wind farms be appropriately located, sited, designed and operated to ensure a wide range of issues are adequately considered and addressed. This includes assessment of aviation impacts, noise emissions, environmental impacts, scenic amenity and landscape values, and the safe and efficient operation of local transport networks and road infrastructure.

Q. How have the potential health impacts of the wind turbines been considered?

Reviews of research literature conducted by leading health and research organisations from all over the world, including the World Health Organisation, Australia's National Health and Medical Research Centre, the UK Health Protection Agency and the US National Research Council, have concluded there is no published evidence to positively link wind turbines with adverse health effects.

Further information

The Queensland Government will be further engaging on QREZ implementation including on ways to maximise local benefits.

For further information on engagement activities, please visit: www.epw.qld.gov.au/about/initiatives/renewable-energy-zones

Queensland Government