

14 January 2022

Department of Energy and Public Works
Queensland Government

Townsville Enterprises submission will be in response to the following questions that were included in the

QREZ Technical Discussion Paper:

2. Should Queensland adopt elements of the REZ frameworks from other jurisdictions? Please provide details.

31. What are the current barriers for large energy users to access renewable energy?

Dear Sir/Madam,

Townsville Enterprise Limited (TEL) is a not-for-profit, membership-based organisation that seeks to “connect, promote and grow” North Queensland through local business members and partnerships. As the peak economic development body and destination management organisation for the region, Townsville Enterprise has attracted major investment and grown the visitor economy, contributing towards the economic growth of the region.

Townsville Enterprise represents the Local Government areas of Townsville, Magnetic Island, Palm Island, the Burdekin Shire and Charters Towers. Townsville Enterprise’s primary directive is to advocate on behalf of our members, for issues that affect the region. Key governments across the world are looking to transition their economies to net zero emissions and invest in renewable energy technology and Townsville Enterprise are passionate advocates for North Queensland capitalising on this opportunity. North Queensland boasts large deposits of new economy minerals located in the North-West Minerals Province (NWMP), abundant natural resources (wind and solar), as well as access to large swaths of investment ready land.

The Queensland Renewable Energy Zones Draft Technical Paper offers an exciting insight into what this transition to a renewable economy can look like for the whole of Queensland; however, Townsville Enterprise has identified several areas that can be amended to ensure that our region, and the rest of Queensland, can remain competitive with other states in Australia. Townsville Enterprise has reviewed the Queensland Renewable Energy Zones Technical Discussion Paper and found that although there are some promising developments in this area, the North

Queensland region has been excluded from the primary benefits of this plan. The 500 MW capacity allocated to the Northern QREZ is severely underestimating the potential of North Queensland to be a renewable energy hub, as the region possesses both the natural resources and land to facilitate these projects. In this draft plan, Central QREZ has been flagged as the hotspot for an emerging hydrogen economy, but Northern Queensland is not considered to be a hotspot. The North Queensland Hydrogen Consortium (NQH2) has been federally recognised as a NERA cluster and has ensured that Townsville is now recognised as a hydrogen hub. It's imperative for Townsville Enterprise to have the Northern QREZ also flagged as hydrogen hotspot in addition to the Central QREZ. Additionally, there is no mention of large-scale enabling infrastructure projects that will have a significant impact on the expansion of renewable energy in North Queensland. Infrastructure projects such as CopperString 2.0 will support upcoming and operational renewable energy projects such as Vast Solar's Thermal Solar Project and the Kennedy Energy Park. This project will be critical for the region, finally delivering cheap and flexible electricity, and facilitating renewable energy, and should therefore be incorporated into the QREZ plan.

Northern QREZ Target

Attracting investment is one of the key objectives for the QREZ draft plan, however Townsville Enterprise believes that the current capacity limits set for the Renewable Energy Zones are lacking serious ambition. This would be extremely concerning as the projects that Townsville Enterprise has advocated for will demonstrate that this capacity limit is inefficient. The Northern QREZ has been allocated 500 MW of new hosting capacity to be unlocked in Far North Queensland. However, the current project pipeline already exceeds the target set by the draft plan:

- Edify Energy's 10 MW electrolyser pilot plant with plans for it to be scaled up to a 1,000 MW plant
- Origin Energy's 300 MW renewable hydrogen facility at Lansdown
- Sun Metals' progressive plans to set up a 3,500 MW renewable hydrogen plant
- RTE Energy's solar panel manufacturing facility at Lansdown
- Solquartz's silicon smelter at Lansdown
- Queensland Pacific Metals' Townsville Emerging Chemicals Hub (TECH) at Lansdown

- Imperium3's lithium battery plant at Lansdown
- Pure Battery Technologies' battery material processing facility at the Townsville Port
- Australian Mines' Sconi cobalt and nickel mine and processing facility

The division of the capacity limits across the three REZ are also problematic, with the Northern QREZ receiving a quarter of the limit of Southern QREZ. The pipeline of upcoming projects (as evidenced above) demonstrates that the electricity demand for this region will continue to rise as more mining and manufacturing projects come online. A report published by Powerlink has assessed the impact that several proposed mining, metal processing, and other industrial loads (predicted to be operational by 2027) will have on the transmission systems in surrounding areas. The report found that for the NWMP region alone, upcoming projects could create an additional load of up to 350MW. There is also an additional 100MW of demand that is not currently connected to the Mt Isa grid and supplied through standalone power stations¹. Based on the predicted electricity demand required for mining projects in the NWMP, it's clear that the target for the Northern QREZ is lacking ambition and will struggle to attract the necessary investment required to ensure that the region is competitive with other QREZ zones, and the rest of Australia. Additionally, the limit for Queensland overall could also be improved, and this is clearly evidenced when comparing Queensland's proposed energy targets with that of New South Wales and Victoria, who have REZ targets of 12,000 and 10,000 MW respectively. This could result in investors prioritising renewable energy projects in these states and would undermine the draft plan's core purpose of attracting investment into Queensland.

Recommendation:

Townsville Enterprise supports the recommendation made by Solar Citizens, which has called for at least 2000 MW of new renewable energy generation to be added to each of Queensland's three Renewable Energy Zones by 2025 in addition to the projects already under construction. Also, at least 1000 MW of new renewable energy storage should be supported as well. These targets embody the necessary level of ambition to ensure that Queensland

¹

Queensland, P. (2021). *Powerlink Queensland Revenue Proposal*. [Powerlink - Appendix 5.07 - Contingent Projects - January 2021.pdf](#) (aer.gov.au)

remains competitive against other states in the renewable energy arena. It will also ensure that Queensland is on track to meet its commitment of 50% renewable energy use by 2030.

Hydrogen

Townsville Enterprise leads the North Queensland Hydrogen Consortium (NQH2) and was recognised as an official hydrogen cluster in December 2021. North Queensland boasts abundant natural resources, as well as an existing capacity to generate clean energy from solar PV, wind, and hydro. North Queensland is an important and critical link in the supply chain needed for Australia to become a major renewable hydrogen producer and supplier. Projects such as CopperString 2.0, Hells Gate Dam Pumped Hydro, Kidston Pumped Storage, Ark Energy's hydrogen production facility and new hydrogen powered trucks, Edify Energy's consented 200 MW Major Creeks Power Station Project and other large scale renewable projects are just examples of the endless potential of North Queensland to become a hydrogen economy. Therefore, it's imperative for Townsville Enterprise to have the Northern QREZ identified as a hydrogen hotspot within the QREZ technical paper, as the projects listed above clearly demonstrates the regions' ability to compete with the Central QREZ.

Recommendation:

Townsville Enterprise would recommend that the draft plan recognises the Northern QREZ as a renewable hydrogen hotspot. NQH2 is federally recognised as a NERA Cluster, and its members are highly invested proponents for renewable hydrogen. Recognising the Northern QREZ as a hydrogen hotspot will assist in securing both private and public funding, which is essential as the cluster begins the process of forming a Common User Infrastructure Master Plan with other clusters around the country.

Infrastructure

Securing enabling infrastructure is critical for enabling renewable energy to prosper in the region. The region included in the Northern QREZ zone has been severely impacted by limited electricity infrastructure (particularly in the North-West Queensland region). High energy prices and limited transmission infrastructure present a serious threat to potential mining, manufacturing, and renewable energy projects. Improvement of transmission

infrastructure is essential for this region to stay competitive with the rest of Australia in terms of attracting new investment.

During the quarterly Economic Development Strategic Advisory Committee Energy Roundtable, (organised through Townsville Enterprise), several key threats were identified for Energy and Related Industries in North Queensland. Industry's primary concerns were the financing of the whole-of-life costs for long-term infrastructure, the remoteness of North-West Queensland from the national electricity market (NEM) and the lack of electrical interconnectedness of large loads and energy sources. The draft plan does highlight the importance of reliable infrastructure in supporting the renewable energy transition, and Townsville Enterprise approves of the decision to invest \$40 million into the transmission line between Cairns and Townsville to support the Kaban Wind Farm. There is however a lack of acknowledgement of CopperString 2.0, which is a major infrastructure investment that will provide cheap and flexible electricity supply, bolstering the economic corridor from Mt Isa to Townsville. Among the numerous other benefits of CopperString 2.0, it will support access to huge wind and solar resources in North-West Queensland. With ideal weather conditions and vast swaths of unpopulated land, this region's potential to become a renewable energy hotspot is virtually untapped.

Recommendation:

Due to the significant benefit the CopperString 2.0 Project will have for enabling resources in this region, Townsville Enterprise recommends that CopperString 2.0 be recognised in the draft plan, given the impact it will have on improving electricity transmission from Mt Isa to Townsville.

The QREZ Technical draft plan has established some encouraging initial parameters for supporting renewable energy growth in Queensland, yet there is still room for improvement to ensure that the plan is successful in achieving its objectives. The recommendations made in this submission will improve on the plans ability to attract investment and support enabling infrastructure for the renewable energy transition, guaranteeing that Queensland will be able to meet its target that requires 50% of electricity consumption to be sourced from by 2030.

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Yours Sincerely



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