

31 October 2023



To the Senate Standing Committees on Environment and Communications

Thank you for the opportunity to make a submission regarding the [Middle Arm Industrial Precinct](#). [Beyond Zero Emissions](#) (BZE) is an independent solution focussed think tank and we welcome this consultation.

BZE's research has identified Darwin as one of 14 priority locations for Renewable Energy Industrial Precincts (REIPs), capitalising on abundant regional renewable energy resources, existing infrastructure and skilled workforce. However in order to capitalise on the economic benefits that BZE research has identified that REIPs can bring, it is essential that such a precinct is run on 100% renewable energy or as close to this level of renewable energy penetration as possible. Renewable energy for industry is also a focus of BZE's [10 Gigawatt Vision](#) for the Northern Territory from 2019, which informed Northern Territory state policy, and which we present further details of in this submission.

Please find attached our commentary on the role of a Renewable Energy Industrial Precinct (REIP) for Darwin and how this aligns with some elements of the proposed Middle Arm Industrial Precinct. To realise the economic benefits of REIP the renewable energy ambition and the principles of community engagement and benefits, First Nations engagement and benefits, and nature positive land use planning need to be met.

Global markets are shifting to renewables, with indications that gas demand in mature markets will reduce in the near term, with acceleration of the shift to renewables and improvements to energy efficiency among the key drivers. Further investment in gas is not recommended for any Middle Arm Industrial Precinct as this has a high likelihood of leading to stranded assets.

Yours Sincerely,

Beth Mitchell

Head of Engagement, Beyond Zero Emissions.

1. Renewable Energy Industrial Precincts (REIPs)

Australia's industrial regions have a proud tradition of powering our industry and manufacturing sectors. We have shown that clusters of manufacturers powered by 100% renewable energy and storage, known as Renewable Energy Industrial Precincts (REIPs), can protect and grow jobs in these industrial and manufacturing heartlands. We have also shown that REIPs encourage new industries to the region and provide jobs for this generation and the next. Using this model we can power high-intensity-energy-use sectors with low-cost renewable energy, and in doing so we future-proof Australian industry from rising energy costs and fuel supply disruptions. It also creates opportunities to fast-track large-scale reductions in greenhouse gas emissions.

Our analysis of Renewable Energy Industrial Precincts^{1,2} demonstrates that investing in renewable-powered industry in this way creates jobs, increases revenue and boosts industry investment. Australia can become a strong manufacturing nation once again through the establishment of REIPs in our regions. We have identified 14 priority locations for establishing dedicated clusters for industry and manufacturing businesses powered by 100% renewable energy at an internationally competitive price. One of these 14 locations is **Darwin**. Renewable energy for industry is also a focus of **BZE's 10 Gigawatt Vision for the Northern Territory from 2019**, which informed Northern Territory state policy, and which we present further details of in this submission.

Global markets are shifting to renewables, with indications that gas demand in mature markets will reduce in the near term, with acceleration of the shift to renewables and improvements to energy efficiency among the key drivers.³

Energy transition is essential for Australia to maximise the benefits of a zero-emissions economy - such as the \$333 billion green export opportunity identified in our [Export Powerhouse report](#) (almost triple the value of 2019 fossil fuel exports). Our recent report, [Deploy](#), outlines the scale of available technology required to transition Australia to 100% renewable energy by 2030. Our [National Supergrid](#) report highlights the scale of infrastructure that is essential to support the energy transition, including transmission, firming/storage, distribution, system security and equitable access.

¹ Acil Allen, 'Regional Economic Impact Analysis of Renewable Energy Industrial Precincts Hunter Valley REIP'.

² ACIL Allen, 'Regional Economic Impact Analysis of Renewable Energy Industrial Precincts Central Queensland REIP'.

³ 'After Peak in Mature Markets, Global Gas Demand Is Set for Slower Growth in Coming Years - News'.

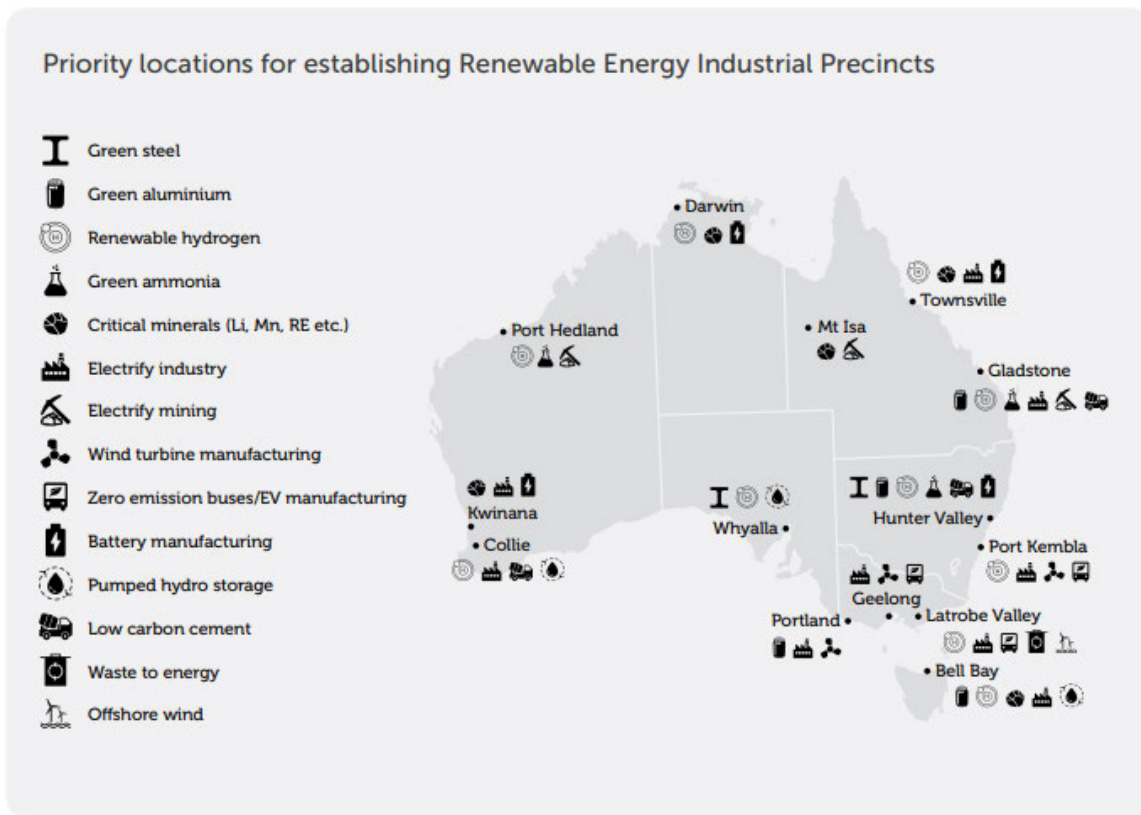


Figure 1 Priority Locations for Establishing Renewable Energy Industrial Precincts

2. Overview of The 10GW Vision

In June 2019, Beyond Zero Emissions released [The 10 Gigawatt Vision](#). It showed how the Northern Territory can put renewable energy at the centre of a sustainable growth strategy that creates over 8,000 new jobs and over \$2 billion in revenue by 2030.

It presented a bold combination of climate solutions and economic policies that will attract private investment and be a catalyst for wider, long-lasting economic renewal. It will put the Territory at the forefront of the global transition towards renewables.

The report had a significant impact on the ground in the NT:

- The NT Government adopted the main elements of the The 10 Gigawatt Vision in their “Climate Change Response - Towards 2050” policy document, and eight of the ten recommendations in the 10 Gigawatt Vision have been progressed
- Our partner, the Environment Centre NT, created a “race-to-the-top” of renewable energy policies and for the first time ever in a Northern Territory election, all major parties across the political spectrum supported renewable energy

- And our then Chair Eytan Lenko was appointed to the Territory Government's Economic Reconstruction Commission

3. Economic opportunities for renewables

Global energy markets are changing rapidly. The rise of renewables is remaking our understanding of the global energy system. Renewables are already the cheapest source of energy in the market, with prices continuing to fall. As new means of using, storing and transporting energy emerge, jurisdictions willing to embrace these changes will flourish. Jurisdictions slow to change risk missing out on one of the great economic opportunities of the century.

The Northern Territory is blessed with renewable riches. As one of the sunniest regions in the world, the Northern Territory has an opportunity to reconfigure the way its economy works: away from expensive, dirty fossil fuels and towards abundant, cheap and clean energy from the sun.

The 10 Gigawatt Vision addresses both economic growth and climate change. Implementing this vision would expand industry, while eliminating carbon pollution from towns, communities, mines and manufacturing.

The benefits of the 10 Gigawatt Vision are powered by building over 10 gigawatts of clean, renewable energy generation by 2030. This means:

- >8,000 new jobs
- >\$2 billion annual new revenue
- 80% saving in household transport bills
- 30% saving in household electricity bills
- Eliminating carbon pollution from towns, communities, mines and manufacturing
- Providing safer, healthier, more affordable and secure places to live and work.

We have shown how the Territory can seize the opportunities presented by cheap and abundant renewable energy to fuel a new wave of sustainable, well-paid jobs. The 10 Gigawatt Vision describes a Territory in which abundant sunshine fuels our trading partners energy needs, more of the value of the region's mineral resources flows to locals, the cost of living is lower and exciting new opportunities in high value manufacturing are created.

4. Prioritisation of 100% Renewable Energy for REIPs

Let's be clear. Gas is not a "transition fuel". There is no such thing as "low carbon gas". Gas is a fossil fuel that according to the International Energy Agency already contributes 22% of

global emissions. Climate Analytics data states gas is contributing 7% of Australia's emissions. Fugitive emissions are a huge and under-reported problem. **The role of energy evolution is to build a new energy infrastructure to replace fossil fuel infrastructure.**

Rather than enabling the growth of fossil fuels, the Territory government needs to address the barriers that are constraining the renewable energy rollout in Australia. These include land access, slow planning and grid connection planning processes, missing transmission, social acceptance issues, supply chain gaps and workforce shortages.

Structural change to how our energy systems operate should extend to best practice community engagement and the development of shared benefit models with key stakeholders including First Nations communities and farmers, while also considering the preservation of biodiversity. All of these groups can be stakeholders and share the wealth generated by the renewable energy system, rather than remain customers and consumers to multinational energy companies.

Beyond Zero Emissions' report, "[National Supergrid](#)" takes a whole-of-system approach to the energy transition. Our position is that the energy transition must benefit ALL Australians and embed compliance with 1.5 degrees of warming into our energy infrastructure. Transmission infrastructure is the backbone of the energy system, however there are other important features, for example, electrifying our homes, businesses and industry.

Instead of investment in fossil fuels, we urgently need investment in distribution upgrades, energy storage, system security and microgrids to deliver low-cost renewable energy, sovereign supply chains and good quality jobs.

5. Strategic Land Use Mapping for REIPs

Strategic land use mapping at national, state and regional scales is needed to optimise biodiversity outcomes as well as other competing land use needs for Renewable Energy Industrial Precincts.

Beyond Zero Emissions supports the recommendations in the Federal [Nature Positive Plan](#) to prioritise Regional Land Use assessments rather than project by project land use analysis. This is critical for a range of competing land use, with biodiversity and the need to protect habitat corridor connectivity on land, sea, freshwater and air an exemplar.

However, there is currently no state or federal mapping that shows how biodiversity and renewable energy resources overlap and interact at regional scales as the renewable energy roll out progresses (noting the work of Net Zero Australia which provides a case study of a

national land use prioritisation approach but is not aligned with specifics of existing planned roll outs at regional scales, as well as the ANU Heat Map data which highlights preferred sites for renewable energy resources and acknowledges biodiversity but does not account for cumulative impacts of projects on biodiversity). It is critical that meaningful national and state based mapping is generated to support this analysis in order to prioritise optimal locations for renewable energy, transmission and other energy and supporting infrastructure.

It is critical that these assessments are transparent and communicated effectively with the community. BZE recommends rapid, well-resourced and transparent mapping of important biodiversity and existing land uses and supporting the Larrakia, the Traditional Owners of the Darwin area, to map cultural heritage to inform the location of generation and transmission upgrades, and to support shared benefits of projects on Country. Impacts on agricultural land also need to be mapped and clearly explained, with accompanying community education using trusted and experienced voices to explain benefits and facts around risks and impacts.

BZE is undertaking a pilot land use mapping project focused on the Central Queensland Renewable Energy Zones and would be pleased to discuss the findings of this work when the project is completed.

6. Prioritisation of Brownfield Sites for REIPs

It is important that brownfield sites are prioritised for industrial land use over greenfield sites with high biodiversity values. The Middle Arm Industrial Precinct as proposed has potential to impact 1500 hectares of greenfield land including high biodiversity value savanna, rainforest and mangrove vegetation which may be of international conservation significance. For this reason adequate land use planning cognisant of biodiversity values and other land use values such as First Nations cultural heritage would be needed. Dredging of the harbour for industrial-scale wharves and jetties needs to be minimised and done only where necessary.