Department of Industry, Science and Resources
Clean Energy Technology Manufacturing
Canberra, Australia

Friday, 13 March 2026

To the Clean Energy Technology Manufacturing team,

Re: Domestic manufacturing of wind and transmission infrastructure

The Clean Energy Council welcomes the opportunity to make a submission in response to the Department of Industry, Science and Resources inquiry on domestic manufacturing of wind and transmission infrastructure. The Clean Energy Council is the peak body for the clean energy industry in Australia. We represent and work with around 1,000 businesses operating in Australia across renewable energy, energy storage, including the onshore and emerging offshore wind industry.

Wind industry proponents are enthusiastic about working with domestic manufacturers and local procurement. However, there are significant structural conditions that prevent locally manufactured wind towers from being cost-competitive. The wind industry is experiencing prevailing turbulent conditions, affecting project timing, delivery and bankability. This has created uncertainty in the near-term demand outlook, due to a variety of factors including planning and project issues, global supply chain challenges, offtake and delays in closure of coal-fired power stations. As a result, near-term deployment projections of onshore wind capacity to the end of the decade have reduced from 42 GW to 29 GW in the last two years.

These delays create a climate of uncertainty and risk for prospective investors wishing to increase Australia's domestic wind manufacturing capacity. Locally produced wind towers are made with a premium when compared with imported goods and can experience higher transportation costs. The size of overseas markets means domestic producers are unlikely to compete without substantial subsidies or offtake support. Facilities will be most competitive if established near Renewable Energy Zones (REZs) due to lower transportation costs, but this in turn limits their ability to achieve an economy of scale. Limited market diversification also risks enshrining monopolies. These barriers risk higher project costs, which translate into higher electricity prices for consumers. Any move by government to improve uptake of domestically manufactured wind towers should seek to address the challenges of demand certainty, cost competitiveness with international imports, and cost neutrality for consumers.

Near-term demand outlook

The near-term demand outlook for the wind industry is highly uncertain. Lengthy approval processes and elevated project costs have constrained the pipeline of projects reaching Final Investment Decision (FID) in recent years (Figure 1). Since 2019, this pipeline has averaged just 970 MW per annum. Once a wind project reached FID, it is still subject to lengthy delays of between 23-37 months, depending on

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the state in which it is being constructed.[1] The current capacity of pre-construction wind projects that have reached FID is 1,457 MW.

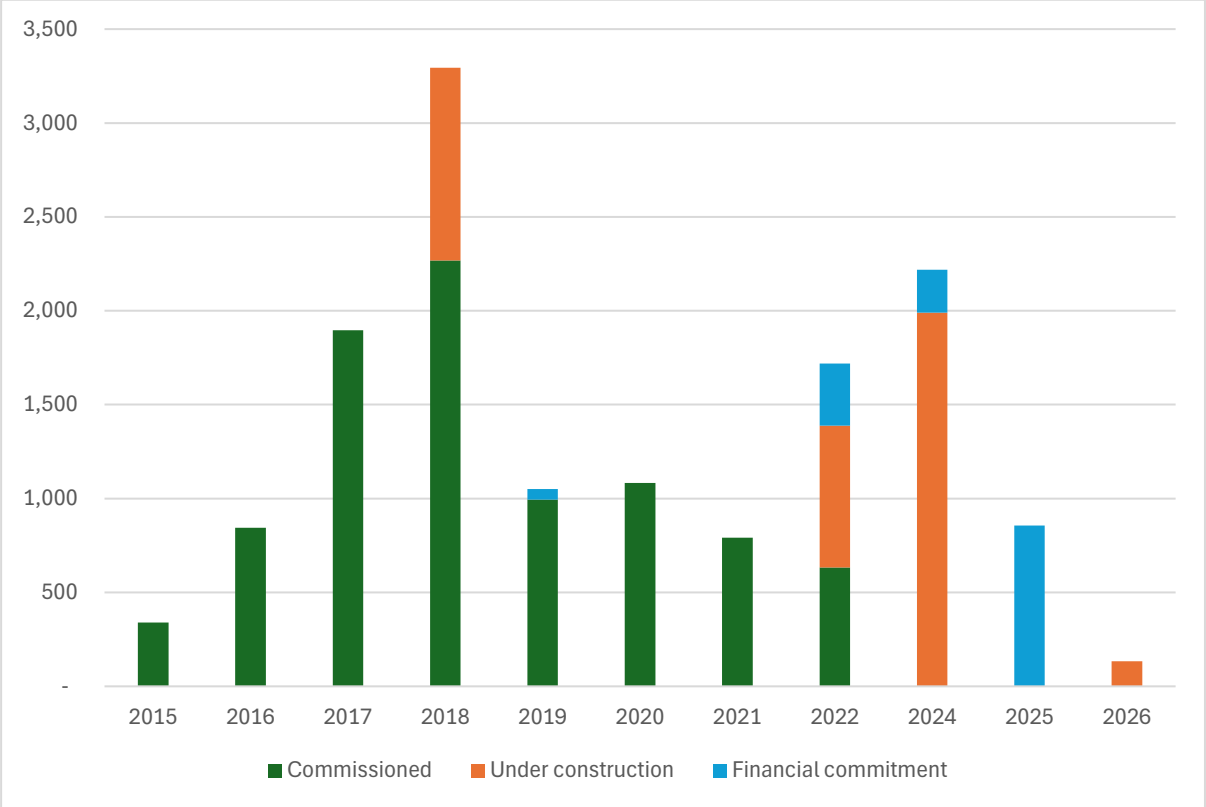

Figure 1 | Wind capacity by year project reached financial close and status, 2015-2026. Source: Clean Energy Council.

Wind projects have also experienced enduring economic headwinds since 2020, where global inflationary pressures have seen the capital costs of projects increasing by around 40% (Figure 2). Cost increases have been due to various factors including shipping challenges and increases in cost of labour and key commodities. Some of these pressures have eased, as supply chain bottlenecks have been removed and commodity prices have stabilised. This has not reduced overall project costs. Site-specific construction challenges, including terrain complexity, geological features, earthworks, and hardstand sizing have created significant cost overruns in balance of plant construction costs.[2] Costs are not projected to normalise to 2020 levels until 2035, after which time further reductions are projected to be

[1] Clean Energy Council. (2026). Quarterly investment report: Large-scale renewable generation and storage, Q4 2025. URL: https://cleanenergycouncil.org.au/getmedia/7d84560f-0ff5-4def-bc4c-366df119497b/renewable-projects-quarterly-investment-report_q4_2025_final.pdf

[2] Aurecon. (2024). 2024 Energy Technology Cost and Technical Parameter Review. Prepared for the Australian Energy Market Operator. URL: https://www.aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2024/2025-iasr-scenarios/final-docs/aurecon-2024-energy-technology-cost-technical-parameter-review-report.pdf

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modest. Over the same period, the costs of utility-scale solar and battery storage are projected to continue to decline. Elevated project costs have resulted in offtake challenges for wind projects. High prices of power per MW limit the customer base for Purchase Power Agreements (PPAs), which increases investment risk. This is exacerbated by domestic policy uncertainty resulting from extending the operating life of coal-fired power plants. In 2025, New South Wales delayed the closure of Eraring to 2029. Queensland's Energy Roadmap also announced plans to extend the operating life of coal-fired power stations in the state to 2046.

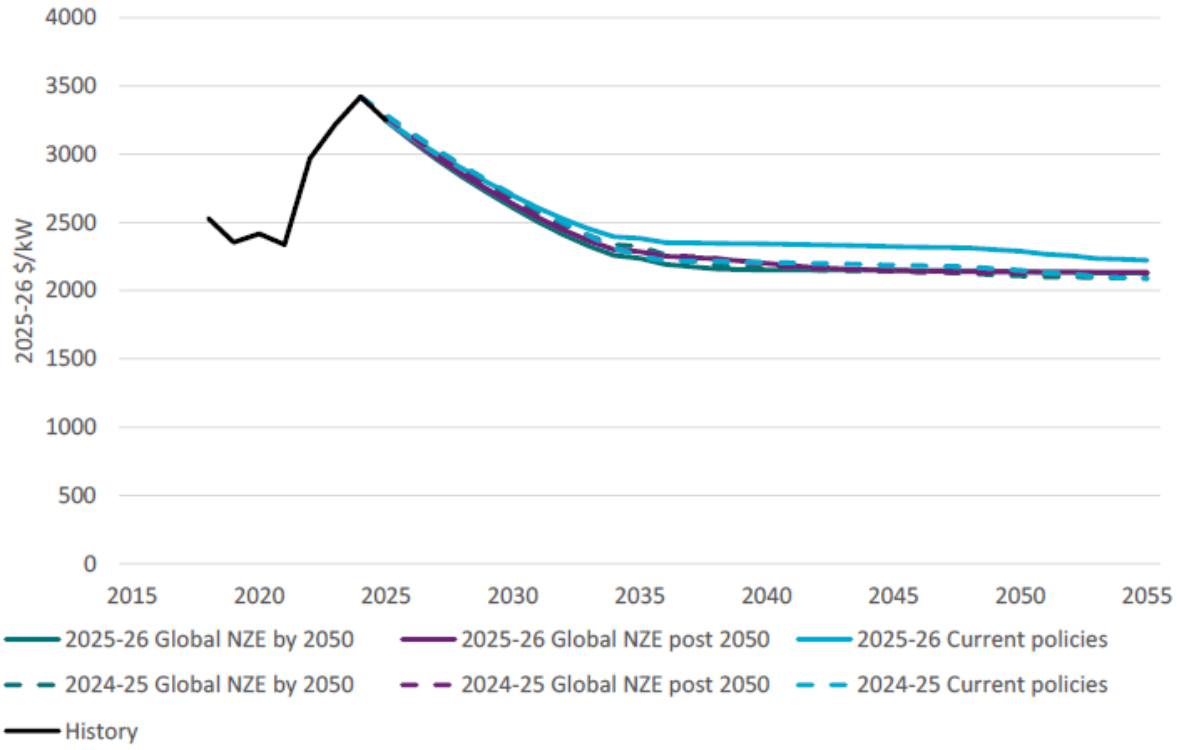

Figure 2 | Projected capital cost for onshore wind by GenCost scenario compared with 2024-25 projections. Source: Graham, P. and Hayward, J. (2025). *GenCost 2025-26: Consultation draft*, CSIRO, Australia.

The reality of elevated project costs enduring into the near-term has also affected least-cost system modelling and projections of the generation composition of the National Electricity Market. Integrated System Plans (ISPs) delivered between 2022-2026 feature highly variable capacities for wind deployment, especially in the near-term. The latest draft 2026 ISP projects wind capacity will double by the end of the decade to 29 GW, then increase to 35 GW by 2035 (Figure 3). Achieving these capacity additions would require an average of 2.8 GW of new capacity installed each year, far in excess of the current project pipeline. This is also a significant reduction on previous ISP; the 2022 ISP projected 34 GW and 43 GW by 2030 and 2035 respectively, while the 2024 ISP was more optimistic, projecting 42 GW by 2030 and 53 GW by 2035. Other recent projections are more conservative. The Net Zero Australia Project's Net Zero by 2050 scenario projects wind capacity at 22 GW by 2030, and 32 GW by 2035.

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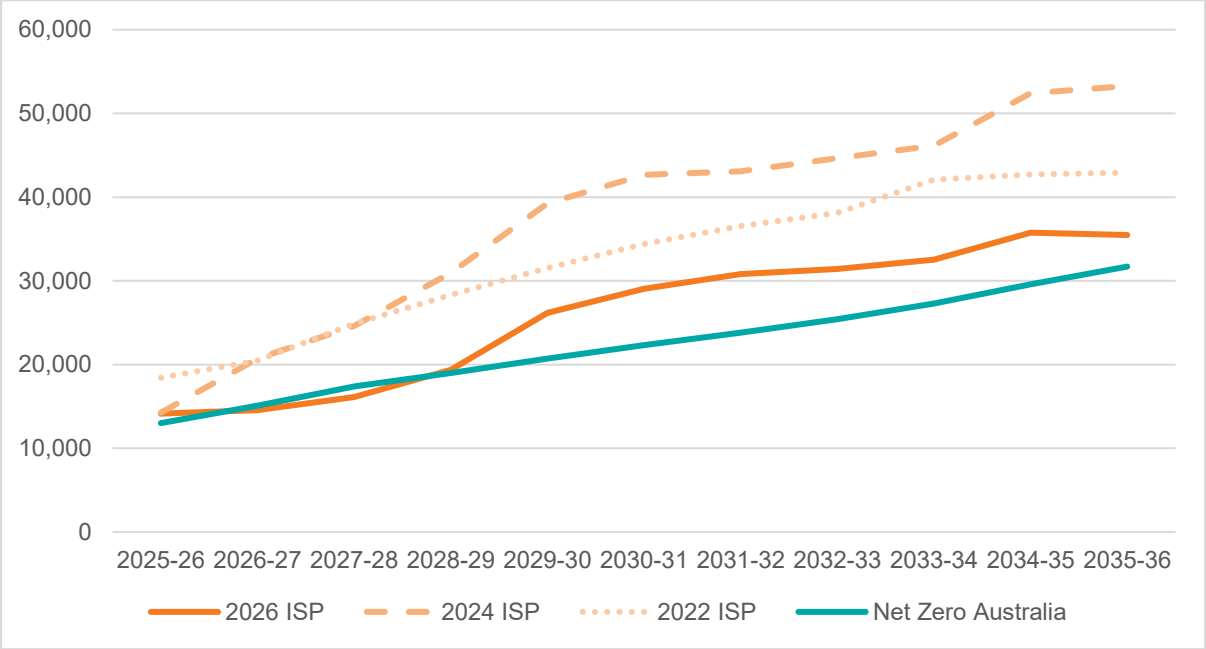

Figure 3 | Comparison of installed wind capacity (MW) from different publications. Each ISP depicts the Step Change scenario, and the Net Zero Australia results are from their Net Zero by 2050 scenario. Sources: AEMO, Net Zero Australia Project Topical Report #1.

Although projections are not predictions, and will certainly prove to be wrong over time, they accurately depict the climate of uncertainty facing the wind industry. Unpredictable demand presents a significant investment risk for prospective manufacturers and is a major barrier to achieving operation at an economically competitive, sustainable scale.

Other barriers to Australian firms being cost-competitive

Cost of domestic production and transport

Another major barrier to domestic manufacturing of wind towers is cost, during both manufacture and transport of goods. Structural barriers limit competitiveness with established overseas suppliers, especially from China. Substantial upfront capital outlays, long payback periods, and demand uncertainty deter private investment. Australia has high input costs from labour and electricity, resulting in materially higher fabrication costs than key exporting countries. Transportation costs are also considerable due to Australia's large geographic footprint. Existing facilities located in Victoria and Tasmania are unable to service regional New South Wales, Queensland and Western Australia cost-competitively due to high transport costs.[3] Competitively servicing new Renewable Energy Zones in these states would require greenfield sites in close proximity to relevant Renewable Energy Zones (REZ).

[3] Tonor, P. (2024). An Industrial Strategy for Domestic Manufacturing of Onshore and Offshore Wind Energy Towers and Equipment. The Centre for Future Work at the Australia Institute. Canberra, Australia. URL: https://futurework.org.au/wp-content/uploads/sites/2/2024/10/Wind-Tower-Report-FINAL-OCT24-1.pdf

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Economy of scale

Australia may have sufficient aggregate demand of wind generation infrastructure to support a pipeline of domestic manufacturing. However, given the limited potential for a greenfield site to service demand beyond a relatively constrained geographical scope, demand needs to be analysed locally. This creates several important limitations for prospective manufacturers: lower overall capacity, fewer projects and proponents, vulnerability to project delays etc. In turn, these limitations affect the likelihood of a new greenfield manufacturing facility will achieve an economy of scale necessary to compete with imported goods. This creates substantial investment risk for prospective manufacturers.

Market concentration

Australia's legacy domestic capability is highly concentrated, with just two operating firms. The last locally produced wind tower was made in 2020. A limited competitive landscape, combined with local content mandates, risk producing supply bottlenecks, reduced bargaining power for project developers, project delays, and overall higher electricity prices for consumers. Any future government funding for greenfield manufacturing facilities must be open to qualified international manufacturers, with a proven capability of manufacturing to Australian standards and industry needs. This would broaden the pool of capable suppliers, enhance competition and improve the resilience of the supply chain. This approach would minimise the risk of creating a market monopoly, and would be more likely to create a robust, sustainable sector that delivers value for money.

Market condition required to sustain private investment

Sustained private investment in domestic wind tower manufacturing capacity in Australia will depend on the presence of stable and credible market conditions that reduce investor risk and provide sufficient long-term demand certainty. As noted, investors require a consistent pipeline of wind projects of sufficient scale and geographic concentration to justify the high upfront capital expenditure associated with establishing a greenfield manufacturing facility. The current near-term demand uncertainty is caused by a multitude of policy, market and supply chain challenges. Achieving a consistent demand pipeline rests on addressing these factors, without which the risk of demand volatility, underutilised facilities, and cost disadvantages relative to established international suppliers will continue to deter private capital from committing to large-scale domestic wind tower manufacturing investments.

Policy options and local content requirements

Local content requirements can play a role in supporting domestic capability, but rigid or poorly calibrated rules risk undermining the timely and cost-effective delivery of wind projects. The current domestic manufacturing base for large wind tower components is functionally non-existent. In this context, prescriptive local content thresholds risk establishing market monopolies and boom-bust demand cycles. In turn, this results in supply bottlenecks, increasing project costs, and construction delays as new domestic suppliers struggle to meet demand at the required scale, quality and timeframe. Any local content requirements must therefore be adaptive to prevailing and emerging market conditions, including local manufacturing capacity, transport constraints, and the maturity of the supply chain. There may also be merit in differentiating requirements for above and below ground components of wind towers that reflect differing levels of maturity across emerging and established segments of the supply chain. Flexible mechanisms such as phased targets, conditional requirements and segmentation

can help ensure that local industry participation grows sustainably while maintaining competition, project viability, and the pace of deployment required to achieve legislated targets.

Supply chain resilience

There are potential opportunities to improve supply chain resilience through improved domestic manufacturing capacity. Imported wind towers are oversized and overmass (OSOM) components, which require substantial storage capacity at ports. Transport from port to site places pressure on road networks and surrounding communities. Infrastructure Australia's 2026 Infrastructure Priority List found that delivering the current wind project pipeline to 2030 requires 62,000 OSOM components.[4] Delivering these components requires addressing more than 900 identified road network constraints and port handling and capacity upgrades. Enhanced domestic manufacturing capacity at could offset some of these OSOM movements, with benefits for local communities through improved social license, and reduced pressure on logistics supply chains and OSOM transport operators and the freight network.

Roles for government

Conduct a sector assessment

The Government should request a sector assessment of the opportunities for domestic manufacturing of wind infrastructure. Sector assessments are the legislative instrument established by the Future Made in Australia Bill 2024 to determine the extent to which an industry is aligned with one of the streams of the National Interest Framework. They support the Government in making significant public investments aimed at unlocking private investment at scale in the national interest. They provide a comprehensive, objective assessment of relevant factors for consideration, many of which are of direct relevance to this inquiry, including:

(a) whether Australia could be competitive in the sector;
(b) whether the sector could contribute to an orderly path to net zero transformation;
(c) whether the sector could build the capabilities of the Australian people and the regions of Australia, and generate employment opportunities;
(d) whether support for the sector could improve Australia's economic resilience and security;
(e) whether support for the sector could:
    (i) recognise the key role of the private sector; and
    (ii) deliver genuine value for money,

A sector assessment would deliver manifold benefits. It would substantiate the robust evidence base needed to underpin policy measures necessary to stimulate domestic manufacturing. It would also identify financial supports most suitable to address the numerous barriers to domestic manufacturing of wind and transmission infrastructure. It would evaluate the opportunity cost of any supports against alternative prospects for financial support. A comprehensive, independent assessment is particularly important in building consumer confidence in domestic wind manufacturing, as the numerous supply- and demand-side barriers to private investment would likely require a multifaceted policy response.

[4] Infrastructure Australia. (2026). 2026 Infrastructure Priority List. URL: https://www.infrastructureaustralia.gov.au/sites/default/files/2026-03/2026-Infrastructure-Priority-List.pdf

Establish a consistent demand pipeline

The key issue facing domestic manufacturers is demand uncertainty in the medium-long term. Industry needs volume commitments covering a minimum of five years, while 10+ years offers a more desirable timeframe. The current market outlook is too volatile to provide this near-term certainty. This suggests existing policy measures are insufficient to deliver a consistent pipeline of demand needed to support domestic manufacturing. Further policy measures are required to achieve this.

Ensure cost neutrality for consumers

Uptake of domestically manufactured goods raises wind project costs. This affects the competitiveness of wind, the bankability of projects, and results in higher prices for consumers. Any mechanism established to increase or ensure uptake of domestically manufactured goods should include measures to insulate consumers from increased costs. That is, any policy measure should mitigate elevated costs for industry while promoting uptake of locally manufactured goods. Any policy measure should leverage work already done to reduce the cost disparity of premium manufactured products, such as the Hydrogen Production Tax Incentive or the Critical Minerals Production Tax Incentive. This would enable the timely implementation of policy supports that are proven and trusted by industry, while protecting consumers from higher electricity prices.

Australia's energy transition has the potential to deliver benefits across the economy by supporting an enlargement of domestic manufacturing. Doing so requires a careful, multifaceted policy response that provides industry with demand certainty, achieves sustainable, cost competitiveness with imported goods, and is cost neutral for consumers.

Yours sincerely,

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