Draft 2024 Integrated System Plan – Public consultation

Australian Workers' Union submission

February 2024

1. Introduction

The Australian Workers' Union (AWU) is one of Australia's largest and most diverse unions. We represent around 72,000 workers across the country, including many that are highly exposed to the historic shifts underway in the electricity sector. The AWU represents workers across Australia's gas supply chain: from extraction through to transport and end users. We also represent the workforce of major industrial users of electricity – many of which are set to further increase consumption as they electrify processes where feasible to do so. Furthermore, many of our members in metalliferous mining and minerals processing will help supply the rollout of the renewable generation technologies and new transmission that the energy transition requires.

The AWU recognises the critical importance of an orderly and effective transition in the electricity sector for these members, as well as a myriad of other workers, households and businesses. Government and industry must ensure the continued delivery of reliable and affordable electricity to all users throughout the transition, in addition to supporting Australia to meet its obligations under the Paris Agreement. We acknowledge the significance of AEMO's Integrated System Plan as the roadmap for Australia's largest and most important network to meet these objectives. The ISP provides an important market signal to investors and an integral reference point for the diverse parties with a role in the system and its ongoing evolution.

We are pleased to provide the following response to questions and issues raised by the Australian Energy Market Operator in relation to the draft 2024 ISP.

2. 'Does the proposed optimal development path help deliver reliable, secure and affordable electricity through the NEM, and reduce emissions?'

The strategic role of gas

The AWU is encouraged by the draft 2024 ISP's recognition of the importance of gas to the NEM in the years and decades ahead. Dispatchable gas generation has a vital and diverse role to play in supporting to transition to renewables. This is so throughout the year but especially during cool periods. Gas will be required during demand peaks, solar and wind droughts and to otherwise support grid stability. In some respects, gas will complement firming technologies such as batteries and pumped hydro systems, though it is unique in the breadth of functions it will fulfill in the NEM.

We also welcome the ISP's exploration of the need for prompt and substantial further investment in the gas systems supplying the NEM. Multiple studies have found that some functions provided by gas in electricity networks will in fact grow over coming decades.[1] Indeed, the draft ISP projects a near-50% increase in gas-powered capacity to mid-century in its most likely 'step change' scenario. Given gas' complementarily with renewables, and the Commonwealth's commitment to treble the rollout of renewable generation,[2] such investment is required as soon as possible. There is also a need for further investment to enhance supply and storage infrastructure – especially to navigate periods of high demand from both the NEM and heating systems. As the draft ISP

provides, such periods "*are forecast to test the limitations of the gas supply network and solutions will be needed to address them*."[3]

Amid uncertainty over the role of gas in Australia's future energy mix, it is encouraging to see as significant a resource as the ISP make clear its significance, as well as support the necessary investment to fulfill its role in the NEM's transition.

Finding: As the 2024 draft ISP reflects, flexible gas generation has a critical role to play in facilitating the NEM's transition to renewables. This requires prompt investment in new gas generation, supply and storage infrastructure.

The importance of offshore wind

The AWU welcomes AEMO's acknowledgment of a role for offshore wind in the draft 2024 ISP: "*offshore wind can drive further diversity in the generation mix. Offshore wind turbines…capture stronger, more consistent wind than onshore turbines*."[4] However, we query the decision to afford consideration only to proposed offshore wind zones in Victorian waters. This appears to be based on the Victorian Government's decision to set generation targets for offshore wind.[5]

Though Victoria is the only State to have declared a discrete offshore wind target, we suggest the Commonwealth's work in this space should have a greater bearing on the ISP. The Federal Minister for Climate Change and Energy has declared six priority areas for offshore wind generation across five states. All such areas, other than that proposed for Western Australia, have undergone consultations to capture feedback from community and other stakeholders. These proposed developments are also supported by a dedicated regulatory framework in the form of the *Offshore Electricity Infrastructure Act 2021* (Cth). The market has responded to these efforts with a wide array of proposals to develop Australia's first tranche of offshore wind zones. A non-exhaustive search of industry and government announcements suggests over 35 projects have been pitched across the six sites.

These efforts are informed by firm technological logic. The Commonwealth's proposed offshore wind zones largely sit adjacent to strategically critical industrial sites that are some of the largest energy users in the NEM. Facilities such as the Tomago and Portland aluminium smelters will remain essential to Australia's industry sector as the energy transition progresses. Yet they require hundreds of megawatts of reliable, constant supply – often posing a challenge for onshore renewables to deliver. Moreover, as these and other industrial users turn to electrification to reduce scope 1 emissions where viable, their electricity demand will only rise further. With capability to provide very high volumes of power at relatively high capacity factors,[6] offshore wind is key to meeting these needs. It appears not just desirable but essential that the proposed generation sites do materialise, as actions by the Commonwealth and industry reflect.

Given this strength and breadth of support, offshore wind warrants greater consideration by the ISP. At the least, the 2024 plan should give regard to all sites where a clearly defined zone has been declared and where dedicated consultation has occurred.

Finding: Offshore wind generation will be important to meeting demand from major industrial users as the energy transition progresses.

Recommendation: The 2024 ISP should consider future offshore wind developments in renewable energy zones proposed by the Commonwealth.

3. 'Do you have advice about how social licence can be further considered in the ISP?'

Ongoing attempts by interest groups to challenge offshore wind developments by stoking community opposition underscore the importance of social licence to the NEM's transition. The risks to timely replacement of legacy generation posed by local opposition are serious and growing. AEMO's acknowledgement of this,[7] and its incorporation of social licence considerations into the ISP, is therefore welcome.

The draft ISP considers important factors in the attainment, retention and denial of social licence for major energy infrastructure – not least network reliability and affordability, mitigating adverse local impacts and quality of community outreach.[8] However, the suggestion that "*communities are asked to host infrastructure…and share the benefits with new industries across regional Australia and with households and businesses in our cities*"[9] is not reflective of an optimal approach to securing social licence. More than a generalised national dividend, the projects that make up the future NEM must directly and strongly support local economic development, together with high labour standards for the resulting jobs, in the areas where they are situated. Put simply, the best path to community buy-in is through community returns through strong employment and development outcomes. Local people should be given confidence that the future NEM will mean more and better jobs for them in areas such as civil construction and the industrial facilities that will depend on a stable, lower-emitting network.

The AWU appreciates the complexity of accounting for and quantifying such issues in the scenario modelling that makes up the ISP. But we believe that local employment and development outcomes will be essential to understanding and addressing social licences issues as the NEM takes on a radically different shape. At the least, the draft 2024 ISP should acknowledge these considerations, with further attempts to incorporate them into future iterations of the plan.

Finding: Direct support for local employment and economic development outcomes is critical to gaining and retaining social licence for major electricity infrastructure.

Recommendation: The 2024 ISP should acknowledge and, as possible, account for local employment and economic development outcomes provided by new infrastructure in its assessment of social licence risk.

4. 'Green exports superpower' scenario

The AWU recognises Australia's potential to emerge as a green exports superpower as the global energy transition gathers pace. Our nation's highly skilled industrial workforce, existing infrastructure, enviable energy and mineral resources and attractive investment environment are notable comparative advantages. With appropriate and ambitious support from government and industry, activities such as green metals production, clean hydrogen manufacturing and critical minerals processing could and should represent major new export industries. The potential benefits to Australia's workers and economy are truly substantial.

We therefore welcome the inclusion of the 'green energy exports' scenario, assuming "*very strong industrial decarbonisation and low-emission energy exports*,"[10] in the draft 2024 ISP. However, the assumptions that the model adopts in relation to the growth of particular green industries (other than hydrogen) and their impact on electricity demand are not clear.

Further clarity in this regard would be valuable. This would assist stakeholders to better understand the 'green energy exports' model and, more broadly, the contours of Australia's potential transition to a green exports superpower.

Recommendation: The 2024 ISP should provide further detail as to assumptions around the growth of green industries and their projected electricity demand in the 'green energy exports' scenario.

References

[1] See for example, Net Zero Australia (2023), '*Net Zero Australia Study: Final Modelling Results – April 2023*'. Available at: https://www.netzeroaustralia.net.au/wp-content/uploads/2023/04/Net-Zero-Australia-final-results-full-results-pack-19-April-23.pdf; Australian Energy Producers (2023), '*The future role of natural gas in Australia and the region*'. Available at: https://energyproducers.au/wp-content/uploads/2023/11/231127-EY-report-The-future-of-natural-gas-in-Australia-FINAL.pdf

[2] Minister for Climate Change and Energy (2023), '*Australia supports global renewable and energy efficiency pledge'*. Available at: https://minister.dcceew.gov.au/bowen/media-releases/australia-supports-global-renewable-and-energy-efficiency-pledge-0

[3] Draft 2024 Integrated System Plan, p. 65

[4] Ibid., p. 40

[5] Premier of Victoria (2023), '*Emerging offshore wind energy sector enters next phase*'. Available at: https://www.premier.vic.gov.au/emerging-offshore-wind-energy-sector-enters-next-phase

[6] International Energy Agency (2019), '*Offshore wind outlook 2019*'. Available at: https://www.iea.org/reports/offshore-wind-outlook-2019

[7] Draft 2024 Integrated System Plan, p. 14

[8] Ibid., pp. 16, 33, 76-77

[9] Ibid., p. 33

[10] Ibid., p. 8