MUA Submission:

Energy Security Board

Renewable Energy Zones Planning

11 September 2020

COAG Energy Council

Submitted by email: info@esb.org.au

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Introduction

This submission has been prepared by Maritime Union of Australia (MUA). The MUA is a Division of the 120,000-member Construction, Forestry, Maritime, Mining and Energy Union and an affiliate of the 20-million-member International Transport Workers' Federation (ITF).

The MUA represents approximately 14,000 workers in the shipping, offshore oil and gas, stevedoring, port services and commercial diving sectors of the Australian maritime industry. MUA members currently handle wind turbines and solar panels in ports across Australia, and would be part of building and maintaining future offshore renewable energy projects.

We support the submission of the Electrical Trades Union (ETU) to this consultation. This submission supplements the general position put forward by the ETU and elaborates on a few specific areas.

The REZ planning framework

We support the comments made by the ETU about the National Energy Market (NEM) and National Electricity Rules (NEL), which have seriously failed to deliver any broad economic benefit to anyone other than company shareholders.

While profits year on year remain stubbornly high the same cannot be said for the many metrics that actually matter to Australian workers and consumers. We share the concerns of ETU members about:

- the quality of the assets
- the safety and reliability of the network
- the maintenance standards
- the numbers of apprentices and trainees
- the number of jobs and regional depots
- the response times and level of customer service

In fact, the only thing to rise alongside company profits are consumers power prices and the annual regulatory costs associated with maintaining a fake electricity market.

The current privatisation, corporatisation and fragmentation of the electricity system cannot be sustained, and there is a need for significant improvement to planning for the electrical system of Australia. The Integrated System Plan provides an opportunity to reverse these trends, and we support this process. Proper REZ planning arrangements could deliver a much broader and more beneficial transition to low emissions energy.

However, we are concerned that both the ISP and the proposed rules for REZs are conceived far too narrowly. The lack of a coherent energy policy in Australia means that the ISP and associated processes have effectively become our energy transition plan – but they are fundamentally technocratic in nature and lack the broader social considerations that are

needed to win the public acceptance and support that the necessary reduction in greenhouse gases needs if it is to proceed without significant public backlash.

The energy transition presents us with many opportunities – but will result in thousands of workers losing their jobs, communities losing long-standing industries, and potentially significant geographical shifts in where energy is generated and jobs are located. This transition looks likely to be taking place in one of the worst economic crises that Australia has ever experienced. If we are to successfully achieve the required reduction in greenhouse gas emissions and an associated just transition there is an urgent need to go beyond the narrow focus on public interest as being solely as electricity consumers (as in the ISP) or as those who are directly affected by the construction of new generation or transmission assets, in a planning sense (as in the proposed Rules for REZs).

Planning for the ISP and new REZs must include social impact of the energy transition and meaningful weight must be given to how best to mitigate it. Measures could include:

- planning for new renewable energy and new REZs to be located as close as possible to existing locations of significant power generation
- requirements for jobs created in REZs to be quality jobs, at industry rates and with good job security.
- Measures to ensure that the recommended path is not just least-cost, but also reduces greenhouse gas emissions most rapidly.
- Reuse of existing transmission assets.

Achieving social license and confidence in these measures requires meaningful consultation with the workers, unions and communities who are affected by and have an interest in these decisions, as well as the broader public. Consultation must include workers and unions who work in the current system, including in the generators scheduled to close, and workers who will be building new infrastructure.

Holistic REZ planning that incorporates social cost and benefit is a good start, but in the economic crisis we find ourselves, we believe that a new approach will be needed to actually deliver the plans for an energy transition that the Australian public needs, at the speed and scale we need it. Much more public participation, investment and ownership will be needed. The model of governments incentivising private investment and padding company profits, while companies extract the last bit of profit out of aging and stagnating assets while gouging customers and laying off workers must end.

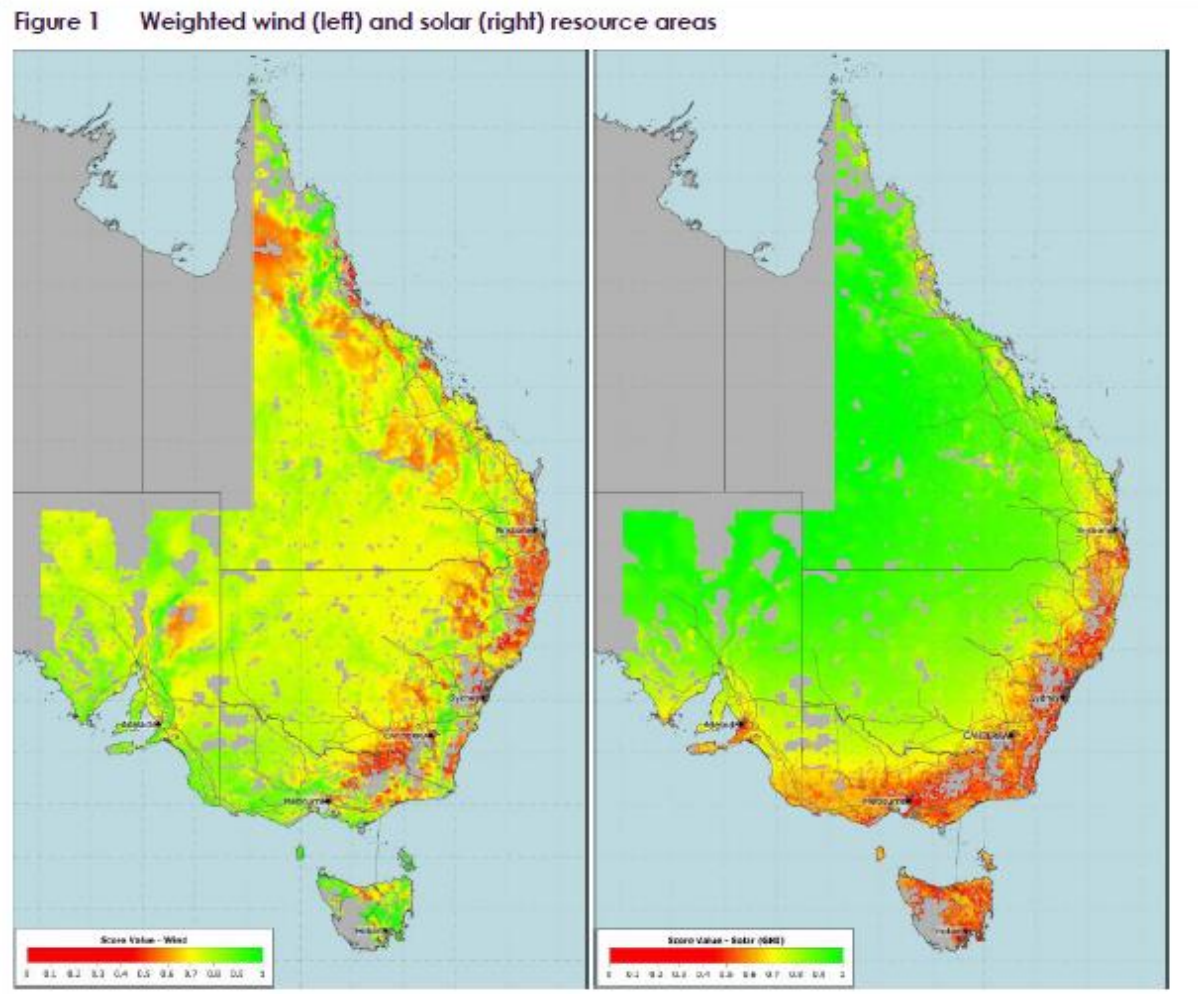
Offshore renewable resources

The 2020 ISP recommends REZs and associated transmission infrastructure without considering the renewable energy resources available off the coast of Australia. This can be seen in Figure 1 and details are outlined in our answer to Question 4 below. The ISP must urgently reconsider the inputs and the scoring system for the REZs it identifies to consider all renewable resources in Australia, including those off the coast - especially offshore wind and ocean wave and tidal-current energy generation. Renewable Energy Zone scoring

should be clearly distinguish between onshore and offshore sectors so the merits of each can be given proper consideration.

Without considering all the renewable resources available, we cannot be sure that the ISP's recommendations are the best available plan.

Figure 1: Renewable energy resources used to evaluate Renewable Energy Zones in the 2020 Integrated System Plan.



Source: Australian Energy Market Operator, 2020 ISP Appendix 5, p.9.

Question 1 If implemented, should the REZ planning arrangements outlined in Chapter 3 be a permanent feature of the regulatory framework or only apply on an interim basis?

If REZ planning arrangements are to be established, then it makes sense to establish them as a permanent feature of the regulatory framework providing certainty to a sector that has long suffered regulatory uncertainty. However, there is little value in establishing REZ planning arrangements either temporarily or permanently if they aren't established with the

right regulatory settings and overarching principles to ensure they deliver a much broader economic benefit than the current narrow frame that has been applied for over a decade.

Entrenching a new process that delivers a continuation of inadequate investment in network augmentation and expansion will only continue to keep electricity prices high and jobs, quality, and reliability low.

Question 3 Should the Jurisdictional Planning Body (JPB) be responsible for designing REZs?

Embedded in this question is the problem of the suitability, representative nature and appropriateness of Jurisdictional Planning Body's (JPB). The proposed rule change should introduce clear overarching parameters for the establishment of JPB's including the potential delineation of JPB's for regular network planning and distinct JPB's for REZ planning.

This is an opportunity to review the criteria for a JPB, including:

- who they represent
- how they manages conflicts of interest
- how they consult and who with
- their composition, and
- their objectives

There are considerable risks in embedding existing JPB's as the bodies with oversight of REZ planning. While some of the risks are a feature of the above criteria and interests, there are also emergent risks due to the change of focus created by taking a new approach through the ISP. JPB's could create an inconsistent methodology of deployment if provided too much jurisdictional discretion resulting in opportunity cost in timings and methods of deployment.

Further, the interests of the shareholders may outweigh the interests of other parties or decisions may be made to deviate from the ISP without clear guidelines on how those changes should be managed.

Design of new Renewable Energy Zones Unions should include workers and unions who work in the current system, including in the generators scheduled to close, and workers who will be building new infrastructure, as well a public-interest organisations, local councils and state governments. Proposals should be subject to public comment and planning process.

Question 4 Should the ISP be the vehicle for triggering a REZ design report?

Whilst the ISP should act as one clear trigger for a REZ design report there are clear examples that other appropriate triggers exist as well as potential risk that some might exist but not necessarily be treated the same as others.

Other triggers might include:

- Decisions of State and/or Federal Government's
- Individual project proponents
- Collective project proponents
- Regulatory initiatives

The trigger for REZ design reports should be flexible in recognition of the above, but also factor in appropriate cost allocation methodologies to ensure transmission companies and consumers are not unreasonably left paying more than they should. In this regard, some form of cost recovery or 'user pays' model could ensure only serious proposals proceed to the planning phase.

The ISP process is also a fairly narrow technical process focussing on the least-cost delivery of energy. It should include greater inputs that address the social impact and implications of the energy transition it is planning. For example, a holistic view of 'cost' should include the impact on the current workforce of coal-fired power stations that will be displaced, and the possibility of re-deploying these workers to work on new energy projects.

The selection of new REZs must give meaningful weight to:

- Planning for new renewable energy and new REZs to be located as close as possible to locations of generators facing closure
- requirements for jobs created in REZs to be quality jobs, at industry rates and with good job security.
- Measures to ensure that the recommended path is not just least-cost, but also reduces greenhouse gas emissions most rapidly.
- Reuse of existing transmission assets.

REZ selection and ranking – consideration of maritime renewable resources

There are gaps in the 2020 ISP's assessment of renewable resources that undermine the strength of its conclusions:

- The 2020 ISP does not include any consideration of renewable resources off the coast of Australia in its assessment of potential locations for REZs. Maps provided in the 2020 ISP are very clear that the overall assessment of renewable resources only included onshore wind and solar, and the scoring criteria also reflect this choice (Figure 1).[1] In our view offshore wind and ocean wave and tidal-current energy should be included in a reassessment of renewable resources and REZ locations.[2] This is particularly important as AEMO identifies that 'diversity of resources' within REZs and between REZs is a critical aspect of selecting REZs.[3]

[1] Australian Energy Market Operator, 2020 ISP Appendix 5, p.9.

[2] Offshore wind because of the number of grid-connected projects in progress. Tidal current generation costs have also declined significantly. Wave and tidal-current energy would substantially add to the diversity of renewable resources. Costs are outlined in Gencost 2019-20, CSIRO, p.20-21. Arenawire, Full steam ahead for King Island wave power trial, 4 October 2019.

[3] Australian Energy Market Operator, 2020 ISP Appendix 5, p.11-12.

- REZ scoring criteria in the 2020 ISP do not reflect the differences and respective benefits of maritime and onshore REZs. Criteria such as the estimate of average property size, land cover, road access, terrain complexity, population density, and protected areas must be adjusted to provide an accurate comparison of strengths and weakness of onshore and offshore projects.[4]

- The only REZ in the 2020 ISP with a maritime component (V5 - Gippsland) includes both onshore and offshore projects, but does not differentiate between the scores for demand correlation, temperature risk, or bushfire risk for the onshore and offshore portions of the REZ. The offshore wind project proposed for this REZ is located 20-25km off the coast, where the daily and seasonal profile of wind, generation output, temperature and bushfire risk will be significantly different to onshore areas.[5] Perhaps as a consequence, the Gippsland REZ is ranked quite low for development. Instead the ISP ranks much more highly a potential $3 billion investment in the VNI West transmission proposal.[6] This conclusion is particularly odd given the Gippsland offshore wind project has no grid constraints and does not need any additional grid investment once the project is connected - the ISP says there is 2GW of capacity available, and a loss robustness factor of 'A' (best possible).[7]

- A key input to the ISP, *GenCost 2019-20,* categorises offshore wind as a speculative 'other' technology,[8] while listing nuclear SMR reactors, gas with CCS, brown coal with CCS, and black coal with CCS in the main listings of the different available types of technologies. [9]

This is despite the fact that SMR technology does not actually exist yet anywhere in the world. Nuclear power generation is also currently banned in Australia, and costed at $16,000 $/kW.[10] There is also no working power generator with CCS in operation in Australia, and no credible proposals underway that we are aware of.

In contrast offshore wind is a well-known and established technology, costed at $6,000 $/kW.[11] A recent IEA report says that the 'value proposition' of offshore wind 'potentially comparable to that of baseload technologies such as nuclear power and coal-fired generators.' The IEA say that the 'high capacity factors and seasonality of offshore wind

[4] Australian Energy Market Operator, 2020 ISP Appendix 5, p. 8-12.
[5] Australian Energy Market Operator, 2020 ISP Appendix 5, p.128.
[66] Proposed decisions rules say the project should not proceed if it costs more that $2.6 billion. Cost projects range from $1.2 - $3.1 depending on route and other factors Australian Energy Market Operator, 2020 Integrated System Plan, p. 76-80, 89.
[7] Australian Energy Market Operator, 2020 ISP Appendix 5, p.129.
[8] *Gencost 2019-20* says that 'other technologies…have higher uncertainty about their future potential investment prospects (ocean located technologies…) but remain of interest' (p.19), implying that their use is more unlikely than the 'main' technologies.
[9] Graham, P, Hayward, J, Foster, J, Havas, L. GenCost 2019-20, CSIRO. Main technologies are listed on p.11-19.
[10] Graham, P, Hayward, J, Foster, J, Havas, L. GenCost 2019-20, CSIRO, p.15
[11] Graham, P, Hayward, J, Foster, J, Havas, L. GenCost 2019-20, CSIRO, p.19-20.

means that 30% or more of its capacity can be counted towards reliability requirements, which is a higher percentage than for onshore wind and solar PV...This reduces the need for investment in other dispatchable capacity, including investment in combined-cycle gas turbines (CCGTs).[12] These are exactly the whole-of system benefits that the ISP should be designed to identify.

There are currently over 4,500 grid-connected offshore wind turbines operating in Europe alone, and more being built across Asia and North America. There is a 2GW project with an exploration licence and environmental referrals underway and led by an experienced developer with serious investment support off the coast of Victoria.[13] In September 2020 it was announced to the ASX that a $1.2 million feasibility study will be undertaken for a 1.1GW offshore project off the coast of WA.[14] An application for an exploration licence has been lodged with the DISER for an offshore wind project off Newcastle. Developers are looking at the possibilities of re-using licenced areas for oil and gas exploration in the Bass Strait for offshore wind.

Offshore wind also offers the opportunity to re-use existing transmission infrastructure for coal-fired power stations located near the coast that have already closed or are scheduled to close, which could also address some of the workforce and planning issues identified above.

The ISP must urgently reconsider the inputs and the scoring system for its REZ recommendations to consider all renewable resources in Australia, including those off the coast - especially offshore wind and ocean wave and tidal-current energy generation. REZ scoring should clearly distinguish between onshore and offshore components.

Without considering all the renewable resources available, we cannot be sure that the ISP's recommendations are the best available plan.

[12] International Energy Agency, *Offshore Wind Outlook 2019*, p.44.
[13] Star of the South, Star of the South Project
[14] Pilot Energy, PILOT TO PURSUE DEVELOPMENT OF OFFSHORE WIND PROJECT, 4 September 2020.