

Online email:

February 20 2020

RE: Draft Integrated System Plan 2020

Thank you for the opportunity to comment on the Draft Integrated System Plan 2020. We commend the Australian Energy Market Operator (AEMO) on a comprehensive and impressive roadmap for our nations energy future.

The Central Victorian Greenhouse Alliance (CVGA) is a formal network of 13 regional and rural councils spread across northern and central Victoria including the cities and shires of Ararat, Ballarat, Buloke, Central Goldfields, Greater Bendigo, Loddon, Gannawarra, Hepburn, Macedon Ranges, Mildura, Mount Alexander, Pyrenees and Swan Hill. The CVGA has existed since 2000, working with its members on climate change projects, advocacy and information sharing.

The [Central Victorian Greenhouse Alliance \(CVGA\)](#) is one of seven Victorian Greenhouse Alliances, formal partnerships of local governments driving climate change action across 70 of Victoria's 79 municipalities. Greenhouse Alliances work across our networks, communities and partners to deliver regional mitigation and adaptation programs. This includes the implementation of joint initiatives that provide economies of scale and enable projects typically beyond the reach of individual councils. Our project work is complemented by targeted advocacy, capacity building activities and regional partnerships.

The CVGA region covers three significant Renewable Energy Zones (REZ); Murray River REZ, Western Victoria REZ and the new Central North Vic REZ. We have also recently developed on behalf of the Victorian Government a renewable energy roadmap for our region, which helps to inform our submission (available upon request).

1. Climate risk and the ISP

We welcome the recognition and integration of climate change risks in the development of this 2020 Draft ISP. It has been clear for many years the impact that climate change will have on the grid and the need to better understand what a future resilient energy system looks like. Following the 2019/2020 "Black Summer" we consider that these issues are even more pressing now than when the draft ISP was released.

The only proposed scenario in the ISP that is currently aligned with the long-term objectives of the Paris Agreement is the Step-Change scenario. As the Investor Group on Climate Change point out in their previous submission to the ISP the current gap between the Central scenario and the objectives of the Paris Agreement "increases investment risks, risks locking in path dependency towards high emissions and increases the risk that investments will be stranded as governments increase action through time."¹ As a result we strongly recommend ensuring that each scenario is aligned with

¹ https://www.aemo.com.au/-/media/Files/Stakeholder_Consultation/Consultations/NEM-Consultations/2019/Planning-and-Forecasting/Submissions/IGCC---ISP-submission-0319.pdf

achieving the objectives of the Paris Agreement and achieving net zero emissions in the sector by 2050 at the latest.

Australia already has effectively a net zero emissions by 2050 target given that all states and territories have either a legislated or aspirational target. It is much more likely that our emissions reduction targets will continue to raise their ambition rather than decrease.

The other aspect to climate risk is ensuring the system is built to best withstand 2050 and 2070 climate change projections. This ensures that the system consider vulnerabilities from all ends of the energy system from the generation through transmission and distribution to the household.

In coming decades, our region is projected to experience hotter and drier conditions and more extreme weather events, such as storms, flooding and bushfire, due to climate change. It will undermine the security and reliability of energy supply. Now, at this time of transition, we have an opportunity to consider how to improve energy resilience across the region and across the NEM.

As the ISP recognises, climate change will affect the grid by shaping energy demand and also by directly impacting electricity infrastructure. For example, as both temperatures and the frequency and length of heatwaves rise, increased air conditioning will lead to higher summer peak demand consumption. This, in turn, could lead to higher energy prices and network outages.

Extreme weather undermines the operation of the grid. For example, in January 2018, about 48,000 households in Victoria were left without power after a heatwave caused network faults such as blown fuses and failed transformers. Under extreme temperatures, electricity infrastructure can also worsen bushfire risk; transmission lines can sag below height limitations in hot weather as they expand and become heavier, and thereby increase the risk of grass fires.

As the region transitions to more renewable energy, there are opportunities to improve energy resilience. Generally speaking, a more distributed energy system can reduce its vulnerability to severe weather events by reducing reliance on long lines and multiple poles. However, severe localised weather events, such as floods and bushfires, still pose risks. In the most resilient system, any particular household or business would be able to operate independently, while being connected to a local grid, which itself can function independently from a centralised system when necessary.

Recommendation: align each scenario with achieving the objectives of the Paris Agreement and achieving net zero emissions in the sector by 2050 at the latest.

Recommendation: include a scenario of aggressive emissions reductions in the next decade noting that many state governments are considering more ambitious interim targets.

Recommendation: identify the need for more work into climate change vulnerability assessments for the energy system and what resilience might look like at different levels.

2. REZ Network Upgrades

We commend the AEMO on the process undertaken to identify least regret pathways for network upgrades across the NEM. We understand this process is complex and requires careful consideration

of multiple scenarios to ensure consumers aren't left footing the bill for over-investment, nor impacts on reliability and security from underinvestment.

However, we consider that the timeframes for investment in network upgrades in our region need to be brought forward and given much higher priority. In particular, the Murray River REZ and Central North REZ should be accelerated, noting that the Western Vic REZ has already committed significant upgrades to unlock wind resources.

Across the Murray River REZ and parts of the new Central North REZ there is approximately 325 megawatts of solar farms under construction and planning approval has been granted for over 2075 megawatts more. There is an additional 2000MW in earlier stage planning, totaling over 4300MW for the region.

The proposed upgrades for VNI West and VNI Minor will open an additional 1930 + 170 MW respectively. Even if 50% of pipeline projects in our region were to be built this would quickly exhaust the network capacity to be opened up by the proposed upgrades over the next ten years.

In our recent Loddon Mallee Renewable Energy Roadmap we estimate that if these projects were to progress then by mid- decade, renewables could deliver over \$1 billion in supply chain benefits alone to the region and create over 3200 jobs during construction. This would create much needed growth in an area of Victoria with the highest rates of social and economic disadvantage.

Without bringing investments forward there is a risk that the region will lose momentum and lose out on this economic boom to regional communities.

Furthermore, our renewable energy roadmap demonstrated very strong levels of support/social license for renewable energy in the NW Vic region. This is distinct from other regions in Victoria including the Shepparton region where there are heightened concerns about renewable energy developments displacing other forms of land use such as irrigated agriculture and amenity impacts.

Community support is vital to the success of any major project including network upgrades and development of REZ, therefore it is important that the ISP can integrate all existing data and knowledge around social license. Otherwise project timelines can be delayed even further and even ultimately abolished if subsequent planning approvals are thwarted from community or political opposition.

Recommendation: Bring forward investments in VNI West to accelerate the regions uptake of renewable energy.

Recommendation: Recognise the broader economic and social benefits of unlocking the Murray River REZ not just benefit/costs of the energy.

Recommendation: Consider social license in identifying preferred pathways for new investment.

3. DER and energy 'resilience'

Households, businesses, towns and communities can become more resilient and self-sufficient through the uptake and coordination of Distributed Energy Resources (DER), while also reducing

greenhouse gas emissions.

The CVGA runs a number of programs to accelerate the uptake of Distributed Energy Resources (DER) across our region. This responds to a strong community desire for greater local control of energy supply and self-sufficiency. Through our engagement across 10 shires in central and north west Victoria we found that overwhelmingly people would like to see DER maximised and greater opportunities for 'sharing energy' locally.

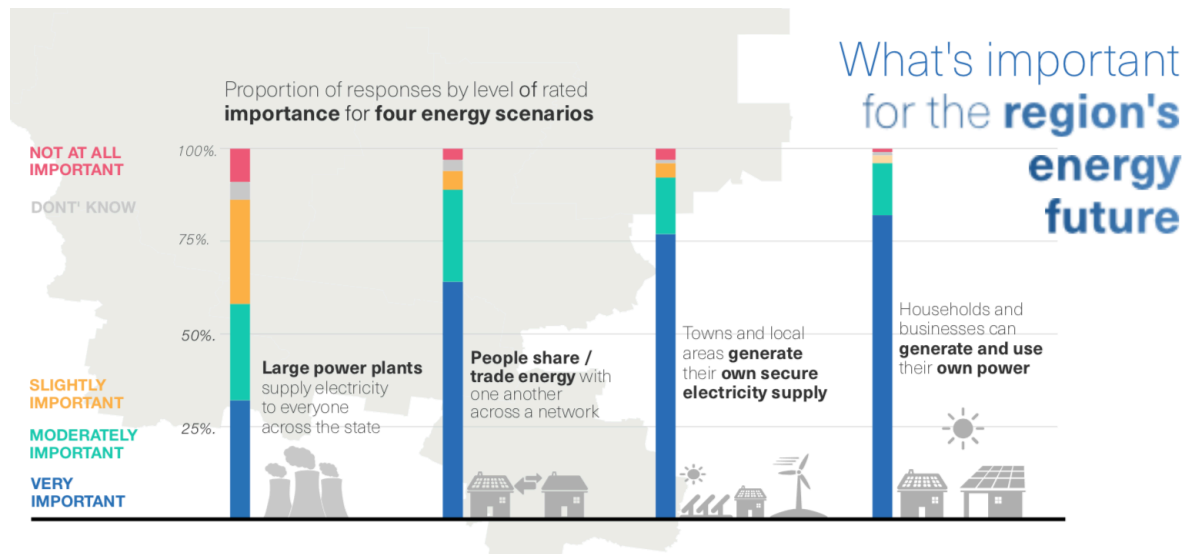


Figure 1: Extract from community engagement of the Loddon Mallee Renewable Energy Roadmap

Policymakers should seek to pursue policy and regulatory reforms that will help to unlock climate-resilient local energy systems that can operate in the broader public interest and complement measures to improve resilience in the centralised energy system while preparing us for a future of increasing climatic instability.

Recommendation: Identify the significant opportunities to improve energy resilience through local DER systems including microgrids. This could be unlocked through greater regulatory incentives for networks to collaborate with communities and businesses.

4. Generation mix

We consider that there is significant untapped bioenergy resources that are not reflected under any scenario in the ISP. Bioenergy can support large-scale solar and DER, and enable commercial and industrial customers to shift away from fossil fuels. The CVGA region has significant untapped bioenergy resources. With our large agricultural sector, the region has significant opportunities for converting biomass to energy by generating electricity, heat, natural gas or even liquid fuels.

Through our analysis as part of the Roadmap, we estimate that if all of the available biomass resources in the region were utilized we could generate an equivalent of more than 1000 GWh of electricity. This would be approximately 40% of the electricity consumed in our region and could also be used to displace natural gas in commercial and industrial applications.

Recommendation: Give greater consideration to bioenergy as a growing future source of

electricity generation.

Please do not hesitate to contact me if you require further information or would like to discuss any of these issues. We look forward to your response.

If you have any questions or queries relating to this submission, please contact Rob Law, Executive Officer, on eo@cvga.org.au or 0467 692 827

Yours sincerely,

A handwritten signature in black ink, appearing to be 'Rob Law'.

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This submission has been approved through CVGA's formal governance structure however this submission may not necessarily represent the individual view of each member council.