

wda
Wimmera Development Association

spsconsulting



ENERGY AS AN ENABLER



Executive **SUMMARY**

Energy security is vital to future proofing industry in the region, however energy reliability and price volatility is putting additional pressure on both major and local industry in the region and acts as a barrier to industry development.

To reach its full economic potential, the region needs to develop further renewable energy projects, increase the benefits of those projects to local communities, and utilise locally produced energy to develop new and emerging industries such as secondary processing opportunities in agriculture, hydrogen production, manufacturing and mineral sands mining. Now is the ideal time for the region to capitalise on changes to energy systems that attract investment, drive innovation and create jobs in the region.

The region is well placed to be a leader in renewable energy developments and export out of the region. However, stakeholder feedback indicates a range of barriers exist to improving energy supply and regional

development, including a lack of coordinated planning across all levels of government. Bold, creative and collective action will be required to drive investment and deliver significant benefits to individuals, businesses and communities across the region. This may be limited by change resistance within the region and a lack of readiness to capitalise on investment opportunities when they arise. However, there are several industry-based opportunities in Horsham which may be used as an ideal testing ground for new ideas. Community and stakeholder education will be critical in improving the region's resilience and capacity to adapt and respond effectively to opportunities for development.

Energy as an enabler

PROJECT IDENTIFIED OUTCOMES

OUTCOME 1: Attract regional investment

OUTCOME 2: Develop local and regional industries

OUTCOME 3: Job creation

OUTCOME 4: Attract people to relocate

Energy as an enabler

PROJECT IDENTIFIED OUTPUTS

OUTPUT 1: INCREASE RENEWABLE ENERGY GENERATION AND CAPACITY TO TRANSMIT

- Action: Undertake an Energy Audit of the region to identify communities where an increase in energy availability will provide opportunities, allow growth and generate improved community and business outcomes.
- Action: Form a regional advocacy group to focus discussion at a strategic level to develop a unified energy vision and identify key projects for the region.
- Action: Advocate for Grampians region REZ projects with VicGrid, for example a big battery project in the region.

OUTPUT 2: DEVELOP INVESTMENT READY PROJECTS COUNCILS AND COMMUNITIES

- Action: Develop an opportunities roadmap for large organisations to encourage investment of capital in the region.
- Action: Identify potential investors and sources of capital and develop relationships.
- Action: Build the narrative around reasons to invest in energy projects in the region.
- Action: Develop renewable energy literacy in the region.
- Action: Build resilience to change in the community through education and information including projections for the future of the region if nothing changes.

The Grampians region is identified as one of Victoria's REZs targeted for further development of renewable energy generation. Several million dollars of projects have been targeted for the Grampians region which will drive regional economic development and unlock further industry and economic development potential in the region through supply of reliable, renewable and cost-effective energy.

Locally generated, cheap, renewable energy will support the expansion of existing businesses and development of new industries in the region such as secondary processing of agriculture products, local manufacturing and value adding to mineral sands. There will also be an opportunity

OUTPUT 3: SHOWCASE THE REGION AS A LEADER IN RENEWABLE ENERGY

- Action: Develop a strategic stakeholder engagement plan that identifies and prioritises key regional, local government and industry stakeholders and outlines how they will be engaged.
- Action: Develop clear and consistent benefits-focused key messaging for use in all communication and engagement, including why renewable energy projects are important for the region and how they link to regional and industry priorities.
- Action: Develop resources and training aligned with benefits-focused key messages and develop designated webpage for regional information.
- Action: Deliver Energy as an Enabler meetings in the region with key regional leaders and stakeholders to present the opportunities in renewable energy and build knowledge of the benefits of industry.

OUTPUT 4: OPPORTUNITIES FOR LOCAL INDUSTRIES

- Action: Deliver industry information sessions in the region with key stakeholders around renewable energy projects and the opportunities.

to expand local food microbusinesses and pursue data centre opportunities given access to cheaper energy options. Further development of energy infrastructure will be required to ensure cost competitiveness, including big battery opportunities, but the location, space and road and rail infrastructure are available.

Communities, local government and regional leaders will play a critical role in realising this opportunity for the region. They must be appropriately educated and equipped to advocate for and support investment in the region, large-scale projects and industry development including local business expansions and large corporations pursuing new opportunities.

Role of renewable energy as an **ECONOMIC ENABLER**

BACKGROUND

Industry, particularly manufacturing, plays an important role in the economic health of the region, providing jobs and driving local expenditure. Energy security is vital to future proofing industry in the region, however energy reliability and price volatility is putting additional pressure on major industry in the region and acts as a barrier to industry development. Costly, unreliable and inadequate energy supply across the region is creating business uncertainty and depressed productivity.

With a total population of 53,500, the Wimmera Southern Mallee supports 23,360 jobs and has an annual economic output of \$6.776 billion. The Agriculture, Forestry and Fishing industry sector makes the greatest contribution to economic output in the

region, which at \$1.3 billion accounts for 19.73% of total output. This industry sector is also the largest employer with 4,649 jobs which represents 19.9% of total employment within the region¹. Manufacturing supports 1,270 jobs in the Wimmera.

EMISSIONS

As outlined in the GNET Roadmap to Zero Emissions for the Grampians Region², emissions from industry in the Grampians region, primarily manufacturing, are mostly associated with the use of natural gas. Specific uses vary from plant to plant, but the most common requirement is for heat in industrial processes. Compared to renewable electricity, gas is relatively high in emissions.

Many of the region's industry leaders are transitioning to renewable energy to improve energy security and reduce emissions. Based on current practice, emissions from industry are expected to reduce by 32% by 2050. However, long-term reliance on gas will prevent industry in the Grampians region achieving emissions reductions post 2025. Pursuing zero carbon opportunities for manufacturers will be critical to future proofing this vital sector in the region.

There is potential to achieve emissions reductions from industry of up to 80% given the right focus and policy settings. Encouraging manufacturers in the region to invest in switching from gas to renewable electricity, secure Power Purchase Agreements and invest in new behind the meter technologies will drive emissions reductions.

THE WIMMERA SOUTHERN MALLEE

Industry, particularly manufacturing, plays an important role in the economic health of the region, providing jobs and driving local expenditure.



53,500

total population

\$6.8B

economic output

\$1.3B

from the Agriculture, Forestry and Fishing industry sector

1 <https://app.remplan.com.au/wimmera/economy/summary?state=9wIMHXkLmUWpz30FJlvMKdU2hrhKB2>

2 <https://www.gnet.org.au/roadmap-to-zero-page>

OPPORTUNITIES

Figures from the Clean Energy Council's 2019 report show Victoria has \$5034m of renewable energy projects under construction or financially committed, creating 2894 jobs in Victoria. Therefore, demand is high for resources and workers in Victoria, which is great news for people living in the Grampians region, with strong growth in the sector projected for the future. In addition to construction jobs, sectors such as hospitality, healthcare, and education and training will also see high employment growth driven by renewable energy projects. Now is the ideal time for the region to capitalise on changes to energy systems that attract investment, drive innovation and create jobs in the region.³

The transition of consumer preference to ethical and sustainable products is gaining traction and these products are becoming more important and sought after. It is anticipated this will eventually impact industrial manufacturing processes such as chemical and ceramic manufacturing. Access to renewable energy near the source of raw materials will reduce the carbon footprint of everyday products.

Power purchase agreements, or PPAs, offer the largest and quickest emissions reduction opportunity for many organisations. A PPA confirms the consumer is receiving 100% renewable electricity and in the Grampians region this is directly from a local source. Securing a Power Purchase Agreement may be less risky for industry than competing in the wholesale energy market. Given that electricity and gas prices in Australia have doubled and then doubled again since 2000, the ability to lock-in a long-term pricing arrangement, typically offering savings of 20-50%, offers a strong risk-management strategy. For the renewable energy producer, a long-term 'off-take agreement' (as they are referred to by generators) reduces their financial and project risks.

There has been rapid growth in the take-up of PPAs since 2016, with at least 3,600 MW of new renewable energy capacity installed to supply these contracts. Almost half of this capacity has been installed in Victoria, helping to create local employment.

THE BENEFITS OF PPAS FOR INDUSTRY INCLUDE:

- Long-term (10 or more years) supply
- Price certainty that is not available in the conventional electricity market
- Prices that are as low as or lower than the general market
- Readily available
- Low risk

In most contexts a company's emissions relating to electricity will be reported based on Victoria's average emissions intensity of electricity consumption, which is very high. The fact that they are in the Grampians region, with a very high renewable electricity share, will not generally be reflected in reported emissions. A PPA is a legal contract that confirms the consumer is receiving 100% renewable electricity. Depending on the context a company may be able to use a PPA to support emissions claims.

³ GNET Roadmap to Zero Jobs and Training Factsheet, <https://www.gnet.org.au/roadmap-to-zero-page>



Mars Australia signed a 20-year PPA with energy provider Total Eren in 2018 to generate the equivalent of 100% of Mars' electricity from renewable solar energy. Mars Australia announced in March 2021 that the deal has now come into effect with the Total Eren Kiamal solar farm in north-west Victoria to put the equivalent green energy into the grid on its behalf to offset the electricity used in their six factories and two offices in Australia.

The director of renewable energy advocacy group ReAlliance, Andrew Bray, said PPAs were a growing trend in the renewables sector.⁴

SOLAR

Solar generation in the region can be expanded through onsite-solar, solar farms and local storage. As technologies advance, batteries will become cheaper and more common

place. Adoption of energy storage and batteries within the region will improve power quality and reduce coal-powered electricity imports. Improving energy efficiency in buildings and industry will also deliver emissions reductions. On-site solar energy generation, or behind the meter generation, is an attractive opportunity for sites with suitable space and a moderate energy demand.

⁴ <https://www.abc.net.au/news/2021-03-03/chocolate-company-mars-emissions-reduction-power-deal/13211162>



Recent developments of highly energy efficient (and higher temperature) industrial heat pumps, along with new technologies such as bioenergy and renewable hydrogen, are enabling industry to switch from gas to electricity. While electricity is more expensive than gas, the higher efficiency of heat pumps and other new technology overcomes the cost penalty.

WASTE

Heat, renewable electricity, biogas and liquid biofuels can be produced

from biomass and organic waste created as a by-product of another process such as farming, forestry, manufacturing or homes, including food and garden, sawdust and manure. Through industry and agriculture, the region has a significant volume of biomass available that may be used as an energy source. Energy from waste works most efficiently where large quantities of waste production and energy use occur at the same site, such as abattoirs. This avoids transport of waste materials and allows for on-site use of energy including heat.

“WE CAN
THINK
BIG AND
CREATIVELY.”

Dave Brennan, Wimmera CMA CEO



Hepburn Shire Council is running a bioenergy trial using an anaerobic digester unit to break down organic waste to create fuel in the form of biogas, and fertiliser in the form of digestate. Businesses have developed partnerships to use food manufacturing by-products, for example Castlegate James, a pet-food maker, Davos Worm farm and compost producers. City of Ballarat is also investigating ‘waste to energy’ options.

HYDROGEN

The proposal for the Ballarat Hydrogen Project will assess the viability of building a hydrogen generation facility within the Ballarat region. As regions grow the consumption of gas will naturally increase, but by blending hydrogen into the gas supply the carbon impacts of these expansions can be reduced. The ‘Ballarat Strategy 2040’ highlights six potential corridors which will observe population growth and the gas network will expand. The facility could also provide 100% hydrogen for industrial or transport uses.

BIG BATTERIES

In November 2020, the Victorian Government announced plans to procure a 300 MW battery to be installed at the Moorabool Terminal Station, near Geelong, ahead of the 2021-22 summer period, as part of

its transition to net zero emissions by 2050. Increased interconnections and energy storage technologies, such as batteries, support variable renewable energy and will help unlock the full potential of Victoria’s renewable energy opportunity. When operating as part of the System Integrity Protection System (SIPS) during the summer months, the battery will provide increased transmission capacity, to balance geographical variability in wind and solar resources in NSW and Victoria. When not part of the SIPS, the battery will charge when renewable energy is cheap and plentiful during the day and discharge when the power is needed.⁵

In July 2021, Lumea, the commercial arm of TransGrid, announced plans to build a 300 MW battery at its Deer Park substation, west of Melbourne. It is planned to come online in 12 to

18 months at a cost of \$270 million to \$300 million. In an industry first, the battery is planned to be fully financed by the private sector.

Battery manufacturers are also moving to production of mid-sized batteries for remote towns, schools, retailers, greenfield housing developments across Australia, such as the battery included in the community energy storage system installed at Yackandandah.⁶

To reach its full economic potential the region will need to successfully develop further renewable energy projects, increase the benefits of those projects to local communities, and utilise the locally produced renewable energy to develop new and emerging industries such as hydrogen production, manufacturing and mining.

The Yackandandah battery is craned into position. Image: TRY



⁵ <https://www.energy.vic.gov.au/renewable-energy/the-victorian-big-battery/the-victorian-big-battery-q-and-a>

⁶ <https://www.abc.net.au/news/2021-05-24/community-battery-yackandandah-ausgrid-electricity-shakeup/100159460>

Case Study

MINERAL SANDS

Cheap reliable energy is an important enabler for Victoria to unlock its regional development potential by becoming a global leader in mineral sand product manufacturing.

Victoria is home to globally significant mineral sands deposits. Mineral sands are used in growth industries such as telecommunications and batteries, as well as ceramics and paint. Victoria hosts 39% of Australia's Zircon and 51% of its Rutile.⁷ The majority of this mineral potential is in the Wimmera Southern Mallee. Raw mineral sands product goes through several processing phases before it is ready to be used in manufacturing processes. The majority of 'downstream' processing is undertaken overseas, predominantly in China. While this decision is often made for corporate reasons (many mineral sands companies are owned by Chinese entities as part of a vertical integration strategy), commercial factors are also critical. In particular the cost of electricity, labour and water, are important contributors to the cost of 'downstream' processing of mineral sands. In addition, environmental considerations including the legislative framework, timing and likely conditions placed on projects are considered.

The WIM Resource Avonbank project near Horsham is in advanced development with completion of a test pit and demonstration plant underway. The project is targeting Total ore reserves of 311.8 Mt 4.8% heavy mineral that will underpin a 30-year mine life. This project will potentially provide long term employment opportunities for Horsham locals and the wider community with several hundred jobs expected during the construction phase and 150 to 200 jobs during the operational stage over 30 years. Access to local renewable energy sources will reduce operating costs for this project, and potentially enable local processing of mineral sands.

Mining and exploration is a growing industry in Victoria contributing to regional development and employment. Exploration investment in Victoria was worth \$152 million in 2020 – a significant increase over the previous five years. The industry paid \$110 million in royalties in 2019-20. Victoria is projected to receive \$140 million in royalties across the resources sector in coming years annually.⁸

The recent trade agreement covering rare earth concentrates between the USA and Australia, designed to reduce global reliance on China, presents the industry and region with an opportunity to further develop the potential these natural resources present. Consideration of regional grid capacity limitations and grid planning, such as through VicGrid, will be critical to overcome these constraints.

39%

of Australia's Zircon

Victoria hosts 39% of Australia's Zircon and 51% of its Rutile.⁸ The majority of this mineral potential is in the Wimmera Southern Mallee

\$152M

Investment

Exploration investment in Victoria was worth \$152 million in 2020

⁷ <https://minerals.org.au/news/mineral-sands>

⁸ <https://minerals.org.au/news/victoria%E2%80%99s-minerals-industry-supports-more-resources-regional-industry-and-communities>

Case Study

ENERGY INDEPENDENT FARMING

There is a significant move in agriculture to investigate net zero emissions approaches, in everything from vehicles to genetics and inputs.

Energy Independent Farming Pty Ltd, a part of multi-faceted agricultural firm Blairfarms, is currently developing an on-farm renewable-energy generation, storage and use project at Horsham. Through collaboration with industry and all tiers of government, the project will focus on renewable-energy capture and storage technology to produce 'green' hydrogen via on-farm electrolysis. The goal is to replace farm reliance on diesel. By 2030, it is expected that a network of hydrogen-fuel outlets for heavy vehicles and machinery will be established.

"The main energy consumption for Blairfarms is the many different types of farm machinery that use on average 130,000 litres of diesel a year. PBSeeds operates a grain-cleaning facility that runs 12 to 16 hours a day. The plant machinery operates on three-phase electricity and due to our rural location, this requires a 160-kilowatt diesel generator. The annual cost for this generator is greater than \$50,000.

Financial benefits of pursuing an alternative, apart from developing a carbon-neutral industry, are obvious,"
Mr Blair said.

The project received a \$250,000 Victorian Government grant and is aiming for Federal Government support as well. The first stage of the project is underway to install a solar photovoltaic (PV) system onsite with three 30 kilowatt solar arrays, which will offset power needs of PBSeeds. The viability of sodium-ion flow batteries and a new type of inverter that can step it up to three-phase power will be investigated. Hydrogen production is a planned second step, followed by exploring hydrogen-powered machinery applications, expanding the hybrid-energy network and establishing localised microgrids. Within two or three years, Energy Independent Farming wants to have a working model of renewable energy-to hydrogen-to fuel-cell-powered farm equipment, where students at local agricultural colleges can come to learn about hydrogen power.⁹

The Victorian Government is also investing almost \$20 million in emissions reduction activities over the next four years through the Agriculture Sector Pledge. This investment will deliver a vision, flagship trials of leading research, and tools and services to help farmers to reduce emissions while maintaining productivity and profitability. It will take time for farmers to understand the opportunities available and what is best for their individual businesses, but momentum is growing. The region needs to consider the implications of new technologies and changes in agriculture, for example planning implications etc, to ensure we are ready to support this key regional industry.

⁹ <https://www.pv-magazine-australia.com/2021/05/10/can-hydrogen-bump-diesel-to-power-large-scale-agriculture/>



Photo by PAUL CARRACHER The Wimmera Advertiser

Case Study

DATA CENTRE OPPORTUNITY

Cheap, reliable, renewable energy is a core element of future data centre operations across the globe and companies operating in Australia are no different.

"The communications industry could use 20% of all the world's electricity by 2025, hampering attempts to meet climate change targets and straining grids as demand by power-hungry server farms storing digital data from billions of smartphones, tablets and internet-connected devices grows exponentially."¹⁰

By 2025, data centres are expected to produce 1.9 gigatonnes (Gt) (or 3.2% of the global total) of carbon emissions. A 2016 Berkeley laboratory report for the US government estimated the country's data centres, which held about 350m terabytes of data in 2015, could together need over 100TWh of electricity a year by 2020. This is the equivalent of about 10 large nuclear power stations. The top 100 data centres in Australia account for four per cent of our total energy use – more than any sector other than resources.¹¹

Large tech companies such as Google, Facebook, Apple, Intel and Amazon, have promised to use renewable energy to power data centres, and customers expect sustainability from large players. In most cases they are buying it off grid. Google is the world's largest corporate buyer of renewable energy. Since 2010, they've signed more than 50 long-term contracts to buy energy from wind and solar farms around the world, totalling more than 5 GW.¹² Recently, Amazon Web Services also

announced its intentions to fuel global operations through renewable energy.

There is significant potential for the Grampians region to become the supplier of renewable energy through PPAs or in fact provide co-location opportunities for hyperscale data centres of the future. The region can offer access to renewable energy, geographic isolation and security, and space for large footprints, while not being too isolated from a construction, operation and maintenance perspective.

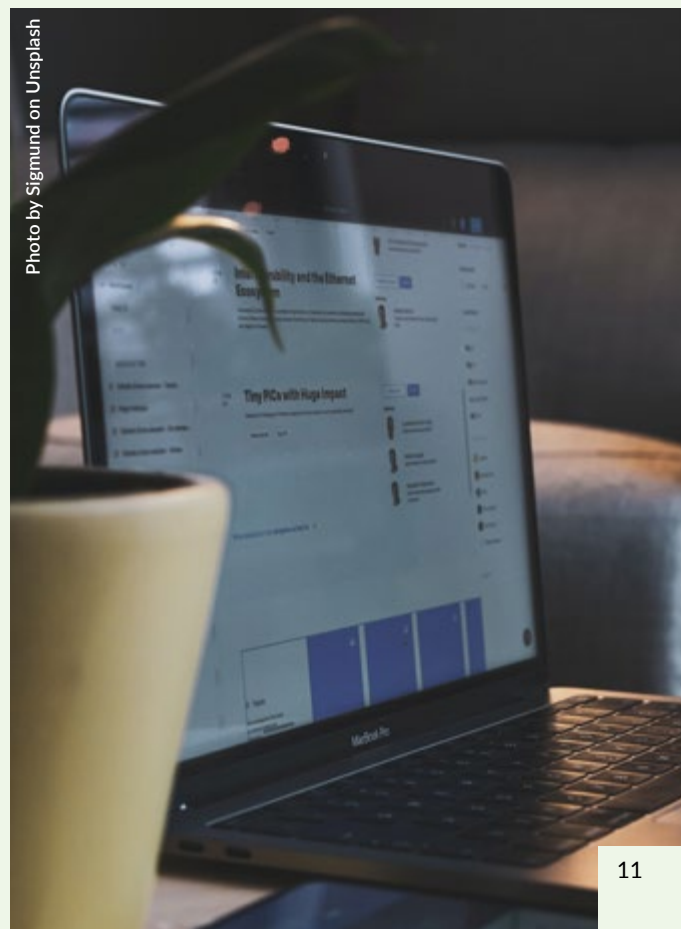
An Australian example is DC Two who have two modular data centres with a third in development; a 2MW facility outside Perth on a wind farm; a 2MW facility on a biomass facility in Victoria; and a 2MW solar-powered data centre due for deployment in Collie, Western Australia.¹³

¹⁰ <https://www.theguardian.com/environment/2017/dec/11/tsunami-of-data-could-consume-fifth-global-electricity-by-2025>

¹¹ <https://onestepoffthegrid.com.au/data-centres-are-primed-for-green-energy-opportunities/>

¹² <https://www.google.com.au/about/datacenters/renewable/>

¹³ <https://www.datacenterdynamics.com/en/news/dc-two-opens-data-center-in-perth-australia/>



CHALLENGES

GRID

Currently, the power grid in the Grampians region is a major limitation to renewable energy generation and poses major challenges for future expansion of the renewable energy sector in the region. The distribution pole and wire model and aging infrastructure are running at maximum capacity, causing instability and regular blackouts in some areas and posing a significant fire risk.

VISION

The Wimmera Southern Mallee Regional Partnership Energy Action Group notes there is a lack of understanding in the community about the benefits of renewables and alternative supply methods. They also recognise that the region doesn't fully understand the energy constraints at the local level, nor how the network might look in 10 years' time and the opportunities available. The existing infrastructure does not leverage the renewable strength of the region and the regulatory framework and distribution network doesn't provide an incentive for transformation. While there are several small projects underway in the region, without a clear vision for the energy future of the region or a large, unified project to get behind, it is difficult to gain momentum and stakeholder and community buy in.

POLICY

Australian Industry Group (AIG) energy and environment advisor Tennant Reed said businesses wanted to see "consistent policies across the country" and that the biggest risk to business would be if the transition away from

fossil fuels was not handled well. Industry needs to be supported and encouraged to make the transition from gas to renewable energy.

INDUSTRY SUPPORT

A lack of information and experience with new-technology heat pumps and other industrial processing equipment is a significant barrier to uptake. Similarly, while large organisations have the resources to investigate and develop PPAs, small to medium size businesses will need support and guidance to make the right choices in this space.

"It is easy enough to build a lot of wind farms and solar farms, the harder work that's in front of us now is to build the transmission lines to connect them up... and to stabilise the system."

Tennant Reed, AIG.¹⁴

SOCIAL LICENCE

Gaining appropriate social licence for renewable energy projects and associated infrastructure, along with responding appropriately to cultural and environmental impacts, are significant risks to future development in the region. A lack of social licence may occur in this context due communication and engagement being insufficient to raise awareness, promote benefits and

build factual knowledge of the project with community, stakeholders and Government. This negative project sentiment can result in community outrage and increased objectors, leading to project re-planning, delays and cost impacts, and ultimately projects being stymied.

The Crib Point LNG Gas Terminal¹⁵ and Stawell Goldmine¹⁶ are examples of projects that were subject to community outrage leading to them being unsuccessful. The Western Victoria Transmission Network Project is currently completing an Environment Effects Statement as required by the Victorian Minister for Planning under the Victorian *Environment Effects Act 1978*. A range of concerns have been raised by the community in relation to the project with community outrage and serious objectors voicing their objections. Many issues point to a lack of understanding of the benefits of the project and a lack of knowledge of facts around the impact on landholders and the community.

14 <https://www.abc.net.au/news/2021-05-02/victorian-government-targets-or-agriculture-transport-interim/100110140>

15 <https://www.abc.net.au/news/2021-03-30/crib-point-agl-floating-gas-terminal-rejected/100036926>

16 <https://www.abc.net.au/news/2014-10-30/victorian-stawell-mine-rejected-for-being-too-close-to-town/5854884>

Stakeholder ENGAGEMENT FINDINGS

Regional voice

 <p>Energy issues</p>	<p>Leadership Cost Energy supply Infrastructure Storage Regulations Lack of diversification / choice Remoteness / distance to grid Current transmission project</p>
 <p>Impact to industry</p>	<p>Cost Disruption to business Personal / professional development Regional development Agriculture Community disenchantment</p>
 <p>Action required</p>	<p>Local leadership Investment Laws and policies Build it Diversify and be creative Education / information Resources</p>
 <p>Opportunities</p>	<p>Community Environment Cost Agricultural Regional development, jobs and growth</p>
 <p>Barriers</p>	<p>Government – local, state and federal People and leadership Cost / money Infrastructure Understanding / mistrust Mindset</p>

Overall, responses indicated stakeholders thought:

- The region is well placed to be a **leader in renewable energy** development to deliver better energy supply within the region and export out of the region however is also change-adverse and **not investment-ready**.
- **Community and stakeholder education is critical** in improving the region's capacity to adapt and respond to climate change with innovation.
- A **range of barriers exist** with regard to improving energy supply and regional development and **bold, creative and collective action will deliver significant benefits** to individuals, businesses and communities across the region.
- There is a **lack of coordinated planning** across all levels of government.

Desired **OUTCOMES**



**OUTCOME 1:
ATTRACT REGIONAL
INVESTMENT**



**OUTCOME 2:
DEVELOP LOCAL AND
REGIONAL INDUSTRIES**



**OUTCOME 3:
JOB CREATION**



**OUTCOME 4:
ATTRACT PEOPLE
TO RELOCATE**



ACTIONS

OUTPUT 1:

Increase renewable energy generation and capacity to transmit

ACTION: Undertake an Energy Audit of the region to identify communities where an increase in energy availability will provide opportunities, allow growth and generate improved community and business outcomes.

ACTION: Form a regional advocacy group to focus discussion at a strategic level to develop a unified energy vision and identify key projects for the region.

ACTION: Advocate for Grampians region REZ projects with VicGrid, for example a big battery project in the region.

OUTPUT 2:

Develop investment ready projects, Councils and communities

ACTION: Develop an opportunities roadmap for large organisations to encourage investment of capital in the region.

ACTION: Identify potential investors and sources of capital and develop relationships.

ACTION: Build the narrative around reasons to invest in energy projects in the region.

ACTION: Develop renewable energy literacy in the region.

ACTION: Build resilience to change in the community through education and information including projections for the future of the region if nothing changes.

OUTPUT 3:

Showcase the region as a leader in renewable energy

ACTION: Develop a strategic stakeholder engagement plan that identifies and prioritises key regional, local government and industry stakeholders and outlines how they will be engaged.

ACTION: Develop clear and consistent benefits-focused key messaging for use in all communication and engagement, including why renewable energy projects are important for the region and how they link to regional and industry priorities.

ACTION: Develop resources and training aligned with benefits-focused key messages and develop designated webpage for regional information.

ACTION: Deliver Energy as an Enabler meetings in the region with key regional leaders and stakeholders to present the opportunities in renewable energy and build knowledge of the benefits of industry.

OUTPUT 4:

Opportunities for local industries

ACTION: Deliver industry information sessions in the region with key stakeholders around renewable energy projects and the opportunities for local business expansion.



Project development AND DELIVERY

NETWORK DEVELOPMENT

As part of the 2020-21 State Budget, \$540 million has been made available over four years for the Victorian Government to invest in network solutions in Renewable Energy Zones (REZs). The Victorian Government Renewable Energy Zones Development Plan¹⁷ outlines a plan to unlock 10GW of new renewable energy capacity in Victoria, taking capacity to a total 16GW. The plan targets network infrastructure investment and the establishment of

VicGrid, a body to plan and develop Victoria's renewable energy zones.

The Grampians region is identified as one of Victoria's REZs targeted for further development of renewable energy generation. Several million dollars of projects have been targeted for the Grampians region, as outlined below, which will drive regional economic development and unlock further industry and economic development potential in the region

through supply of reliable, renewable and cost-effective energy. The benefits to the region include local revenue generation and flows, industry jobs, thousands of construction jobs, and strengthening local supply chains.

17 https://www.energy.vic.gov.au/_data/assets/pdf_file/0016/512422/DELWP_REZ-Development-Plan-Directions-Paper_Feb23-updated.pdf

Stage 1 projects under consideration for immediate REZ Fund financing in the Grampians region

Project	Capital Cost (\$M)	Expected network benefit	Delivery timeframe (years)	Delivery risk (low, medium, high)
Western: V3				
250MVar synchronous condenser at Horsham	\$32-\$76 ¹	Scale efficient solution to address system strength and connection issues. This is estimated to benefit up to 1818MW of renewable energy generation and save \$29M ² on capital costs through scale efficiency.	2.5-4	Low
Western: V3				
Increase the rating of the Western Victoria Transmission Network Project (WVTNP) from 220kV to 500kV from North Ballarat to Bulgana ²	\$132-\$308	Enable the connection of up to 1200MW of renewable energy projects above the existing WVTNP.	5 ³	High

² This project is subject to the existing WVTNP and will only progress if it does not delay the delivery of the existing WVTNP, and will be the subject to EES processes.

³ Ausnet estimate of project delivery.

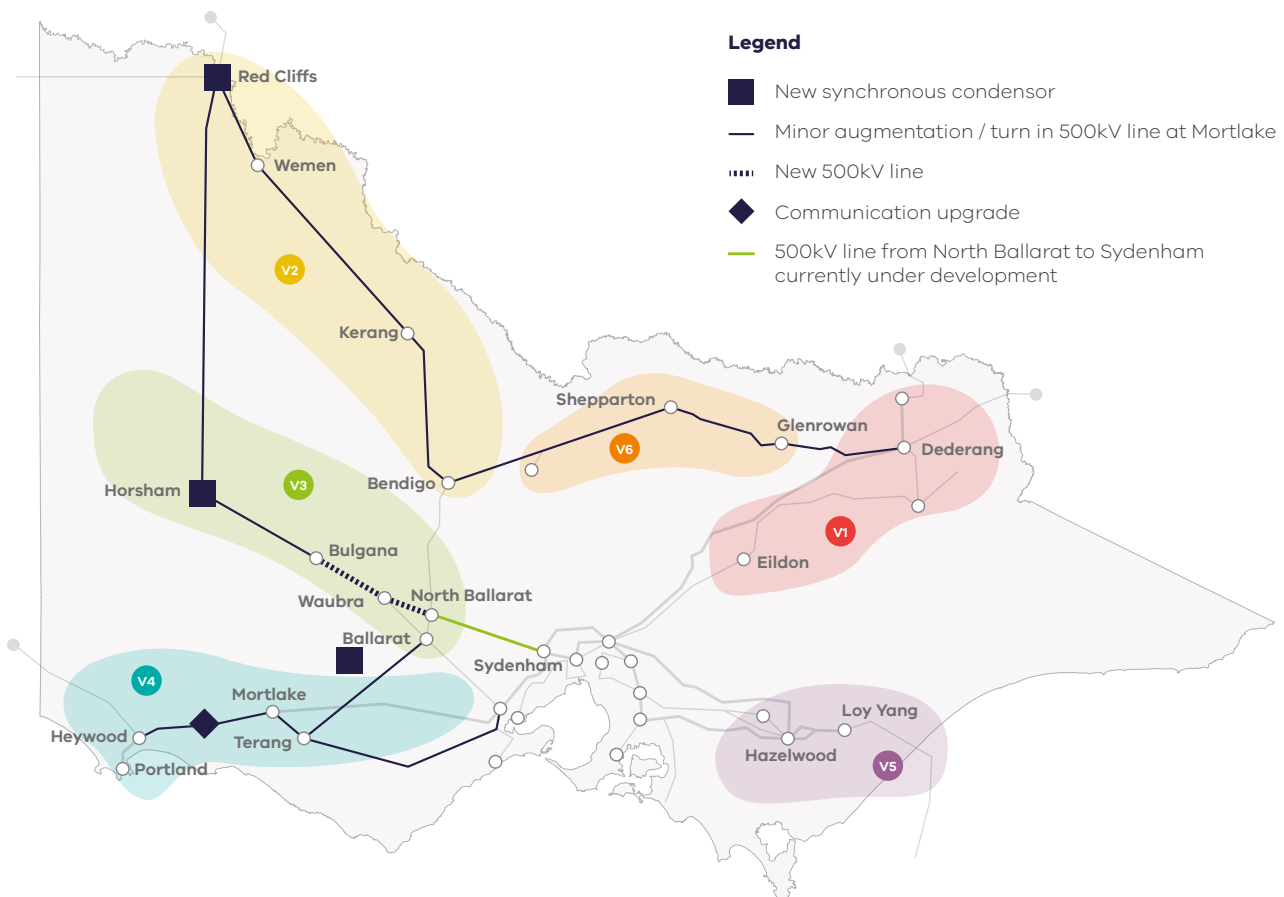
VICGRID

The Victorian Government will establish VicGrid in mid-2021, tasked with the overarching planning and development of Victorian REZs.

VicGrid will engage with regional communities to ensure appropriate and beneficial development in each REZ.

The Government's \$540m REZ Fund can be used in a variety of different ways to facilitate RDP solutions including:





- funding investment gaps to bring forward network projects under RIT-T processes where appropriate;
- direct grant funding or co-funding of projects; and
- financing of investments with cost recovery from beneficiaries.



Victoria's Renewable Energy Zones overlaid with immediate network projects¹⁸



Stage 2 projects under consideration for medium term REZ Fund financing in the Grampians region

Project	Capital Cost (\$M)	Expected benefit	Delivery timeframe (years)	Delivery risk (low, medium, high)
Western: V3				
125MVar synchronous condenser at Murra Warra	\$40-\$105	Scale efficient solution to address system strength and connection issues. This is estimated to benefit up to 2344MW of renewable energy generation and save \$40M* on capital costs through scale efficiency.	2-5-4	
350MW x 3h of storage capacity (assuming BESS)	\$275-\$643	Increase utilisation of renewable energy by enabling the absorption of excess energy from renewable generation during periods of negative demand. This is expected to increase utilised renewable energy by 383GWh annually and provide benefit to 1765MW of renewable energy generation.	2.5-4	
**New 220kV OH DCCT line from Murra Warra to Bulgana via Horsham (~125km)	\$170-\$396	Provide up to 1000MW of anticipatory network capacity for future renewable energy generation projects. This is expected to increase utilised renewable energy by 3835GWh annually.	5-6	
Second 350MW x 3h of storage capacity (assuming BESS)	\$194-\$454	Increase utilisation of renewable energy by enabling the absorption of excess energy from renewable generation during periods of negative demand. This is expected to increase utilised renewable energy by 383GWh annually and provide benefit to a further 1765MW of renewable energy generation.	2.5-4	

NEXT STEPS

The region is currently suffering from a lack of access to reliable, affordable energy which is limiting economic and population growth.

Locally generated, cheap, renewable energy will make it possible to expand existing local businesses and develop new industries in the region such as a hydrogen production, local manufacturing, secondary processing opportunities in agriculture and value adding to mineral sands. There will also be an opportunity to expand local food microbusinesses and pursue data centre opportunities given access to cheaper energy options. There are several industry-based opportunities in Horsham which may be used as an ideal testing ground for new ideas.

Communities and regions must be appropriately educated on the importance of large-scale projects across industries and the benefits that they can create in regions to build social licence. As well as, where appropriate, be prepared to advocate for large scale opportunities to proceed in the region.



“CSIRO research shows that trust between companies and the communities they work alongside is a key factor influencing a social licence to operate. When companies lose community trust, conflict can occur.”¹⁹

¹⁹ <https://www.csiro.au/en/Research/MRF/Areas/Community-and-environment/Social-licence-to-operate/Voconiq>

Large businesses can set and pursue emissions and efficiency targets, and share knowledge with small businesses in the region. Councils can facilitate knowledge sharing about technologies, financing options and funding support available from state and federal governments.

Councils, Economic Development teams and CEOs must also be supported to ensure Councils are investment-ready and enablers of growth in new and emerging technologies and largescale investments. Helping leaders to understand the barriers to project

and industry development in their community and market the benefits that investment brings including jobs, schools, health etc will help gain critical community support to build a strong region.

Vision

- Develop a place-based regional growth strategy with renewable energy as the foundation
- Support local government decision makers to be ahead of the curve and show initiative
- Communicate with the community about new technologies, project opportunities and the benefits to the region
- Train local government in renewable energy opportunities and community engagement
- Educate project proponents on how communities work, local expectations and guidance
- Leadership training

TIMEFRAMES

ACTION	TIMEFRAME
Investor identification	Q3 2021
Stakeholder engagement plan	Q4 2021
Key messaging	Q4 2021
Regional advocacy group	Q4 2021
Advocate with VicGrid	Q4 2021 ongoing
Resources	Q4 2021
Regional leader sessions	Q4 2021
Energy audit	Q4 2021
Roadmap	Q1 2022
Industry information sessions	Q1 2022
Community resilience workshops	Q2 2022

