

16 June 2017

Wimmera Development Association Submission for the Western Victoria Renewable Integration PSCR

Wimmera Development Association (WDA) is the Wimmera Southern Mallee region's peak sustainable development body, covering the municipalities of Horsham Rural City Council, West Wimmera, Hindmarsh, Northern Grampians and Yarriambiack Shires.

The Association's role is to work with the community and government(s) to attract new investment, further develop existing business and promote the Wimmera Southern Mallee's sustainable development opportunities, both within and outside the region.

Where is the Wimmera Southern Mallee?

The Wimmera Southern Mallee Region covers the northern half of Western Victoria, extending from the South Australian border to Hopetoun in the north east and Stawell in the south.

The Wimmera Development Association facilitates regional economic development for the five municipalities within the Wimmera Southern Mallee Region.



Shire	Population
Hindmarsh Shire	5,494
Horsham Rural City Council	19,774
Northern Grampians Shire	11,509
West Wimmera Shire	3,879
Yarriambiack Shire	6,759

The Wimmera Mallee Region is centrally located half way between Melbourne, the capital of Victoria, and Adelaide, the capital of South Australia.

Regional Facts

- **Defined Area: Wimmera - Southern Mallee**
- **Land Area (ha): 3,395,342.929**
- **Population: 47,415**
- **Gross Regional Product (\$M): \$2,759.650**
- **Per Capita Gross Regional Product (\$'000): \$57.182**
- **Total Output in the area is estimated at \$5,408.996 million**

Victorian Renewable Energy Targets

In June 2016, the Victorian Government committed to the Victorian renewable energy generation targets of 25 per cent by 2020 and 40 per cent by 2025. These targets will be supported by a competitive reverse auction scheme. The scheme is designed to deliver up to 1500 megawatts (MW) of new large-scale renewable energy capacity by 2020 and up to 5400MW by 2025, support capital expenditure of around \$9 billion in renewable energy projects, which would result in about \$2.5 billion of direct investment in Victoria and create up to 11,000 two-year construction jobs over the life of the scheme, particularly in regional Victoria. In the peak year of project construction, the scheme is expected to deliver over 4,000 renewable energy jobs. See more at: <http://www.delwp.vic.gov.au/energy/renewable-energy/victorias-renewable-energy-targets#sthash.BJga0ltz.dpuf>

The Wimmera region of Victoria is suitable for the generation of three major types of renewable energy being wind, solar and biomass. Currently WDA are aware of five wind farms and three major solar projects under development in the Wimmera Southern Mallee region. The region is hampered in its ability to attract renewable energy investment due to the limits of the electricity transmission network in the region.

The transmission network was not designed for decentralised power generation but is at the extremities of a grid designed to send power “out”.

The Grampians region in Western Victoria (consisting of the Wimmera Southern Mallee to the West and Central Highlands to the East) has been highlighted as an integral part of this Victorian Renewable Energy Target mainly due to relatively low impact of wind and solar farms on residential and rural aesthetics. Many landholders on the peripherals of the region have supported these projects by leasing sites for wind turbines for the life of the windfarm. Many producers across the remainder of the region would see this as an advantageous business opportunity to minimise risk from the mainly cropping enterprises. Through a number of previous site tests, the Wimmera plains have been shown to be ideal for windfarm development as wind farms on plains tend to have less stress on turbines from up and down drafts as with the valley and ridge design. Having large expanses of land available with small populations makes the region perfect for these renewable power projects to be located. Unfortunately a large portion of the Wimmera Southern Mallee does not have the power infrastructure to take advantage of these significant projects.

North West Victoria is experiencing a high level of interest for renewable generation connection, which exceeds current network capability. AEMO has received applications for over 1,500 MW of new renewable generation in this area, although some projects are more advanced than others.

Many of these developments are slated for construction along the existing 220kV transmission network between Ballarat – Horsham and Horsham – Mildura.

Current Renewable Energy Developments

Current projects in Western Victoria are forecast to use the majority of capacity of the network from Ararat to Horsham and onto Mildura. Without significant investment further opportunities for Western Victoria and the Wimmera Southern Mallee Region will be extremely limited.

The Victorian Government Renewable Energy Target has highlighted Western Victoria as a key location to meet their 2025 renewable energy targets. Western Victoria has an abundance of conducive weather for both wind and solar renewable energy production with intensive site testing for this generation already being undertaken.

The infrastructure limitations in Western Victoria has a significant flow on effect to the economic development of our region. Much of the farming community have looked for diversification models for their businesses over the past decade to assist during times of drought and adverse seasonal conditions. Wind farms and solar installations which have been constructed in the Wimmera region have not only provided this diversification by way of rental income and or lowering base operational costs as well as utilising local trades and suppliers. Local clubs and community groups have been beneficiaries of income from these sites by way of community funds that have been set up.

A number of companies looking at Western Victoria for sites for new wind farms have been forced to reduce the size of their developments or look for an alternative location due to the lack of infrastructure and network capacity, in turn affecting stimulation of the local economy.

Future Renewable Energy Developments

As technologies improve, infrastructure is upgraded and government policy is further developed, the appetite for renewable energy supply and demand will increase. Any future upgrades to the Western Victorian power network will require flexibility for future use which includes the ability for large scale solar and wind developments to have the ability to connect to the networks and upgrades to surrounding infrastructure which will allow small scale and community energy projects to connect to the network.

Improvements in technology and reliance on renewable energy is expected to grow. The Wimmera Southern Mallee sees this as an exciting time for the region, one where the region can assist and deliver further inputs into the power network whilst also taking some of the pressure off of the network and building capacity. These upgrades to the power infrastructure would be seen as a step towards an efficient power network able to move the resource to where it is most needed location and creating stability to the network.

Whilst batteries will assist with power storage and efficient movement in several locations, these will also only be possible where the network has existing capacity. Once again, there will be limitations for the Wimmera Southern Mallee region without additional infrastructure upgrades. Small community energy projects while trying to assist with the overall issue will again be constrained by the lack of infrastructure and network capacity.

Wimmera Southern Mallee municipalities are supportive of the 500kV network augmentation which would see an additional 500kV delivered to Horsham from Ballarat and a new SA/Vic interconnector constructed. While this option is the most expensive of those listed in the AEMO PSCR, this option would deliver massive opportunities for the region in power network stability, economic development and employment opportunities.

Current Power Infrastructure - Deficiencies

Currently, the main transmission line in the Wimmera Southern Mallee region feeds from Ballarat to Horsham and then travels north to Mildura where it meets the Murraylink Interconnector. A southern interconnector is located along the coastline, to Portland and then to South Australia.

It is envisaged that a third interconnector to increase to supply and stability of the Vic and SA power supply will be constructed between Melbourne, Ballarat, Horsham and through Western Victoria into South Australia.

New technologies, eg solar, wind and bioenergy are all very much on the radar across the Wimmera Southern Mallee region. Currently, development of larger projects is minimal because of insufficient access to the grid in the region. A third interconnector passing through Western Victoria, Ballarat, Horsham and on to SA via Nhill and Kaniva would deliver many possible new locations for renewable energy projects.

Many smaller communities are looking at ways to both reduce their energy consumption as well as small scale energy projects to offset the community energy use. For example, Natimuk Community Energy is aiming for 100% renewables by 2030 including energy trading. This is seen by smaller communities as a way of securing smaller towns' power supply as well as assisting the current networks to cope with peak load periods.

Many of these community energy projects may be hampered by the lack of network capacity, for example, if Natimuk were to construct a solar farm, it is highly likely that Edenhope further along the 66kV line would be unable to connect a small system to the network.



Figure 1 - Transmission lines in Western Victoria (greater than 66 kV)

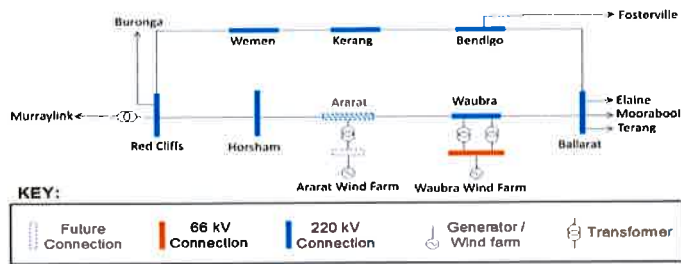


Figure 2 – The transmission system in North West Victoria, currently restricting investment into the region.

In addition to renewable energy, currently the West Wimmera and Hindmarsh Shires is serviced by a 66kV line supplying customers to the South Australian border, north to Yaapeet and south to Edenhope. Currently these shires are being hampered in their efforts to actively seek larger industries and renewable projects to locate in their shires due to lack of power infrastructure. An example of this is the Kiata Windfarm south east of Nhill. This project was limited to 30MW in size due to the capacity of the sub transmission line. Other companies that have expressed interest in the region have proposed small scale winds farms of 2 – 7MW due to the severe lack of capacity. These companies have expressed the desire to invest further in the region should the capacity become available.



Figure 3 – Sub-transmission network servicing Hindmarsh and West Wimmera Shires

Conclusion

The WDA supports the long term the creation of a third South Australian interconnector or other network upgrades between Horsham and Keith (South Australia) and through to Adelaide via Nhill and Kaniva which allow the region to access wind, solar and bioenergy opportunities.

The creation of the third interconnector will:

- help open up the areas either side of the South Australian/Victorian border to greater large scale renewable energy investment; and
- Create extra redundancy and energy security for SA through the creation of an extra 220 to 400MW.

Wimmera Development Association on behalf of the Wimmera Southern Mallee municipalities extend the invitation to visit the region to gain further understanding and insight of the current network issues.

Sincerely

Ralph Kenyon
Executive Director

