

COVER NOTE

*Nestor Zambros*  
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Please find enclosed my submission on the Tallawang Solar Farm SSD-23700028

My name Rick Campbell – You may publish my name.

My address Trilby,  
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I have made no reportable political donations.

I acknowledge and accept the Department's disclaimer and declaration.

*R. J. Campbell*  
Rick Campbell

## SUBMISSION FOR THE TALLAWANG SOLAR FARM SSD\_23700028

### OBJECTION

This is my submission and objection to the Tallawang Solar Farm SSD-23700028. It contains the reasons why I object to the project specifically and to the CWO-REZ in general. It was to be lodged online but the website was difficult to access and operate. It would not accept my attachment. If other people are having similar difficulties this will have an impact on the number of submissions received.

## TALLAWANG SOLAR FARM

I object to the Tallawang Solar Farm for the following reasons.

### 1. Cumulative Impact

The DPE guidelines for the siting of renewable energy projects state that priority must be given to visibility and topography, residences, agricultural land use and the cumulative impacts of these projects. The Gulgong district hosts many small “lifestyle” rural holdings and as such has a relatively high rural population density. The Tallawang Solar Farm will not only impact these residents but also the residents of Gulgong which is only 8 km from the project site. With the existing Beryl Solar Farm (90MW), the approved Stubbo Solar Farm (400MW) and the proposed Bellambie Heights Solar Farm (200MW), Tallawang Solar Farm (500MW) and Barneys Reef Wind Farm (440MW) there will be a total of 1630MW of renewable energy projects all within 12 km of Gulgong township.

The cumulative impact of all these projects was raised in the SEARS for the Tallawang Solar Farm but has been dismissed by the developer as of little consequence. Yet they have stated that “the Project area has an elevated grassed hilltop which is prominent and visible from some viewpoints up to 10 km away”. They have also provided a view analysis map which overshadows Gulgong township, Beryl Solar farm, Stubbo Solar Farm, Bellambie Heights Solar Farm and Barneys Reef Solar Farm. This concentration of renewable energy projects and associated transmission infrastructure will destroy the rural landscape and ambience of the Gulgong district and replace it with an environment that is industrial in nature. This will impact the amenity of local residents, decrease property values and diminish the viability of Gulgong as a tourist destination.

### 2. Vegetation Screening

To reduce the visual impact of this project vegetation screening has been proposed in certain areas. However the experience with Beryl Solar Farm is illuminating. This project was approved on the basis that effective vegetation screening would be provided within 3 years of construction. The plantings failed and despite numerous protests nothing was done. Finally the owner applied successfully for a modification to extend the compliance period for a further 3 years. Yet what guarantee is there that these plantings will ever provide effective screening? Planted vegetation screening is a band aid solution to a problem caused by poor site selection and project design.

### 3. Bushfire Risk

The restrictive layout, enclosure with 2.3m high chain wire fencing, electrical hazards and toxic fumes make fires in solar farms extremely hazardous for RFS volunteers. With safety paramount it is unlikely that RFS crews will attempt to control a major

fire on site. Control will be limited to fighting a much larger fire front once it escapes from the solar farm. The Beryl Solar Farm and the proposed Tallawang and Bellambi Heights Solar Farms are all on the western side of Gulgong and within 8 km of the town. This presents an unacceptable fire risk for the residents of Gulgong.

The solution offered by the developer to address this problem is “the development and implementation of relevant bushfire management practices”. In reality this appears to be the provision of a 10m buffer zone around the perimeter of the project. This is totally inadequate. In addition the developer intends to allow host landholders the opportunity to graze sheep under the panels to control vegetation growth. However management of sheep in large scale solar farms is problematic under Australian conditions and has not been widely adopted.

#### 4. Site Decommissioning and Rehabilitation

RES has given guarantees for the decommissioning and rehabilitation of the Tallawang Solar Farm site. These projects are regularly on sold (Beryl 3 times) and so the guarantees will need to be transferred to successive owners. And if any owner goes bankrupt these guarantees are worthless. Unless the government is prepared to underwrite these guarantees or alternatively institute a bond system these projects cannot be allowed to proceed.

#### 5. Economic Benefit

Much is made of the economic benefits that these projects bring to host communities. However most of the materials required for construction are sourced from overseas. In addition there will be insufficient local labour for construction so a mainly itinerant workforce will be used. This will inject some money into the community during the construction phase but the workforce will be minimal once construction is complete. There will be problems in accommodating a large itinerant workforce, with repercussions for the tourist industry. Also this influx of workers has the potential to create social order problems within the community.

#### 6. Compensation

RES through its Neighbours Benefit Program has offered the landholders most impacted by the Tallawang Solar Farm \$8000 per year in compensation. There is also a proposed Community Benefit Scheme. These arrangements must be formalised and signed off before approval is granted for this project.

This is a welcome development in that it acknowledges the impact of this project on neighbours and the wider community. However when compared to the payments made to host landholders this compensation is relatively meagre. This disparity is inequitable in that the whole community must suffer the adverse impacts of this project while a few host landholders acquire most of the benefit.

## 7. Community Support

EnergyCo has stated that proponents of renewable energy projects must engage and build local community support for these projects. Local councils represent community interests and as such the Mid Western Regional Council has implemented regulations relating to solar farms. While the 500m setback from the Castlereagh Highway has been observed by the developer for this project the 200m setback from local roads has not. It would be expected at a minimum that developers abide by council regulations to gain community support for these projects.

### CRITIQUE OF THE CWO-REZ

The original plan for the CWO-REZ was to build new transmission infrastructure in the region to accommodate an extra 3GW of renewable energy projects on top of that already catered for by the existing transmission network. However, with the impending early closure of Liddell and Eraring power stations, this figure was suddenly increased to 11GW without any consideration of the impact this would have on host communities within the CWO-REZ. One of the key tenants of the DPE for the siting of renewable energy projects is their cumulative impact. But with the new transmission lines duplicating the existing 330kV Wellington to Wollar power line, this will concentrate projects adjacent to these transmission lines and so create the cumulative impact that the DPE guidelines are attempting to avoid.

It would appear that in the rush to renewable energy, the mindset that any renewable energy project must be a good project has prevailed, with no consideration of their deleterious impacts. To achieve the desired outcome of cheap, clean and reliable electricity, at the same time as minimising adverse outcomes, the characteristics and integration of renewable energy sources must be examined more closely.

If nuclear power is not an option then carbon emission reduction will be achieved predominately by electricity production from wind and solar. But due to the intermittent nature of both wind and solar matching supply with demand is difficult. Energy storage with batteries and pumped hydro will be required to “firm” supply. This will not be cheap! And if wind and solar production is located at distance from the consumer then extensive new transmission infrastructure must be built. Again not cheap! “Poles and wires” already account for approximately half of the consumers electricity bill. To achieve the desired outcome of cheap, clean and reliable electricity the costs for both storage and transmission must be minimised.

Solar is more problematic than wind in this regard. The midday peak in solar output does not match the morning and evening demand peaks. To fully “firm” daily solar

output approximately 60% of production must be stored and then returned for later use. If electric vehicles are widely adopted then the preferred option of recharging when parked overnight will further exacerbate this problem.

It is not only the within day mismatch of solar output to demand that is a problem. At NSW latitudes solar output declines by a third in the winter months. Batteries and pumped hydro provide a means; albeit an expensive means; to solve the daily mismatch of supply and demand. But there is no practical or economic method of storing electricity on a seasonal basis. And again this problem will be compounded if electricity is to replace gas heating in the winter months.

Electricity production from wind, while intermittent, does not have the inherent mismatch of supply and demand as does solar. This would suggest that the electricity storage requirement will decline as the proportion of wind to solar production increases.

A study commissioned by the CEFC in 2018 found that rooftop solar, if fully exploited in Australia, had the capacity to produce 245TWhrs of electricity annually. This exceeded total annual Australian grid demand of 218TWhrs at that time. Even with increased electricity demand, if wind is to be the major contributor to demand, then the solar requirement can be met from rooftop solar. If rooftop solar were to replace solar farms then the following beneficial outcomes would be achieved.

1. There would be no loss of productive agricultural land.
2. The visual and environmental impacts of solar farms and consequent community opposition would be eliminated.
3. There would be no need for the associated transmission infrastructure and so a similar reduction in visual impact, environmental impact and community opposition. Power losses associated with electricity transmission over long distances would be eliminated.
4. The costs associated with the construction, running and decommissioning of solar farms would be eliminated. These costs plus the profits of the mainly overseas owners must ultimately be paid for by the electricity consumer.
5. The same for the associated transmission line infrastructure.
6. If the battery storage required to firm solar output is installed at the residential level then electricity supply would not be as much at risk from outages caused by major transmission line and infrastructure failure.

Wind farms can be sited on land or offshore. Offshore wind farms are more expensive to construct but have the following advantages.

1. Offshore wind is stronger and more consistent.
2. If located at an appropriate distance offshore (25kms?) there will be little opposition in terms of visual, noise and environmental impact.
3. The population of Australia is concentrated in coastal areas and so the required transmission infrastructure will be much shorter than for onshore wind farms. This will achieve benefits in terms of cost and power loss.

4. Wind is stronger over sea at night and over land during the day. As such offshore wind is a much better fit with solar output and so will reduce the required amount of battery and hydro storage.

The recent creation of offshore renewable energy zones in NSW has seen a large number of expressions of interest in building wind farms in these zones. It would seem prudent to establish how much electricity can be produced from these zones and how this will impact on the number and necessity of onshore wind farms. Similarly the necessity of solar farms must be viewed in respect to the potential output from rooftop solar. It is relevant that projections of capital expenditure for solar farms, rooftop solar, onshore wind and offshore wind in Victoria until 2035 are 1.5, 4.9, 8.7 and 29.3 billion dollars respectively. These figures clearly illustrate the priority of both rooftop solar over solar farms and offshore wind over onshore wind in Victoria's renewable energy mix.

## CONCLUSION

RES acknowledges the detrimental impacts of the Tallawang Solar Farm in its "Do Nothing Option" stating that it "would avoid the environmental and social aspects associated with the construction, operation and decommissioning of the Project, such as biodiversity impacts, construction noise, traffic and dust, social community impacts and visual impacts". It then goes on to say these are considered to be manageable and outweighed by the economic benefits to the community and the provision a large amount of renewable energy.

In the above submission I have endeavoured to illustrate that these impacts are substantial and not easily mitigated. With the availability of rooftop solar and offshore wind as alternative sources of renewable energy the "Do Nothing Option" would seem to be the best option.