

Office of the Independent Planning Commission NSW
Level 3, 201 Elizabeth Street
SYDNEY NSW 2000

Re: Walla Walla Solar Farm SSD-9874

Dear Independent Planning Commission,

I am writing in support of the application for Walla Walla Solar Farm, application number SSD-9874.

I support this proposal primarily due its incorporation of both agricultural practices and renewable energy generation. These are both vital for our future as a human species on this planet. In Australia we need to see the shift away from fossil fuels and towards renewable technologies if we are to overcome the scientifically proven principles of climate change (UN IPCC, 2012 & 2013).

The parcel of land to be utilised for Walla Walla Solar Farm is classified as Class IV to Class VI - Land not capable of being regularly cultivated but suitable for grazing (with possible occasional cultivation), under the system of classification by the NSW Department of Planning, Industry and Environment. This means that Class I, II and III agricultural land (Land capable of being regularly cultivated) will not be lost as a result of the placement of the Walla Walla Solar Farm.

In some cases of agrivoltaics (a combination of solar panels and food crops on the same land unit, (Dupraz, C. et al (2011)), the productivity of the land underneath can increase, due to the presence of shade and a change in microclimate, provided by the panels (Adeh, E.H. et al, 2019). It has been proposed that sheep will still graze on the land utilised by the panels, thus agriculture and solar farming will co-exist. It has also been reported anecdotally that if sheep where to lamb under the protection of solar panels, lambing percentages could actually increase due to the shelter provided, potentially increasing agricultural productivity.

The study by Adeh, E.H. et al (2019) found that placement of solar panels on croplands, grasslands and wetlands was associated with the greatest solar photovoltaic power potential due to optimal insolation, wind speed, temperatures and humidity. This means that the Walla Walla Solar Farm is ideally suited to maximise efficiency of the enterprise.

Solar power generation uses far less water than other non-renewable forms of power generation and also creates no air or no noise pollution once constructed. It is this lack of air and noise pollution that makes this Solar Farm able to co-exist in areas where neighbours are to be considered. With the addition of large amounts of tree screening the adverse impacts on the amenity of the neighbourhood will be mitigated.

The Walla Walla Solar Farm also has the potential to make the entire farm more viable. By allowing the owners of the property access to secondary income it can enhance the ability of the farm, its owners and their dependants to remain financially viable through seasonal variations.

If just 1% of agricultural land across the globe was converted to an agrivoltaic system, global energy demand would be offset by solar production (Adeh, E.H. et al, 2019).

By creating a sustainable renewable source of energy we are essentially assisting to safeguard the future of agriculture, which relies on predictable rainfall, moderate temperatures and the absence of extreme weather events. The future of agriculture relies on reversing the effects of climate change, which a shift to renewable energy can help us do. If more communities were to embrace sustainable agrivoltaics perhaps we will all have a brighter future.

Yours faithfully,



Dr A. Wright-Hands, B.V.Sc (Hons 1) N8254

References

Adeh, E.H., Good, S.P., Calaf, M. et al. (2019) *Solar PV Power Potential is Greatest Over Croplands*. Sci Rep 9, 11442. <https://doi.org/10.1038/s41598-019-47803-3>

C. Dupraz, H. Marrou, G. Talbot, L. Dufour, A. Nogier, Y. Ferard, (2011) *Combining solar photovoltaic panels and food crops for optimising land use: Towards new agrivoltaic schemes*, Renewable Energy, Volume 36, Issue 10, 2011, Pages 2725-2732

United Nations Intergovernmental Panel on Climate Change (UN IPCC), (2012) *Renewable Energy Sources and Climate Change Mitigation*, https://www.ipcc.ch/site/assets/uploads/2018/03/SRREN_Full_Report-1.pdf Visited 12.11.2020

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