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To Whom it May Concern,

Muckaty Solar Precinct

I am writing to request that this proposal is assigned the highest level of scrutiny under the EPBC Act for its impact on protected matters. Its self-assessment understates the level of risk on several issues under the themes land and water. In its current form this proposal has many unacceptable shortcomings including impacts on listed species particularly the bilby.

I understand this would be the largest solar farm in the world[1]. Given its enormous scale any impacts are massively amplified. For this proposal to align with the precautionary principle as expected under the principle of economic sustainable development, where there may be risks of serious and irreversible impacts, these must be avoided. This demands a high degree of rigour in the assessment of risk and assurance as to the efficacy of any proposed mitigations to a high degree of certainty. There remains an immense amount of uncertainty associated with this proposal.

The proposal's scale also demands transparency, with opportunity for public input. This proposal should be on cleared land and definitely not a bilby stronghold. The urgency of responding to climate change should not be used as an excuse for bypassing a thoroughgoing assessment process, as we also face biodiversity tipping points.

I expand on the following issues below:

1. Site selection - the applicant has not provided sufficient justification for on cleared land, is not transparent and is focused on minimising the proponents costs
2. Impact on species - notably bilby
3. Impact on bats, birds and insects
4. Proximity and impact on Lake Woods and other wetlands
5. Unnecessary GHG emissions from land clearing.

[1] https://www.theecoexperts.co.uk/solar-panels/biggest-solar-farms

1. **Site selection**

Why isn't the precinct being built on land that has already been cleared?

The site selection process appears to have been very narrow and is not transparent. It appears that the proponent has excluded most of Australia for narrow economic reasons. Only locations close to the existing approval and overhead transmission line were considered

Furthermore land being used for pastoral purposes (including leases that are already cleared and badly degraded) were excluded as these properties are described as having imitations due to leaseholders' requirements / demands. At its root this appears to be an exercise in cost minimisation with the applicant shifting these costs onto native environments.

A far more expansive search of suitable sites is needed.

- The details of this search need to be made available to the public
- Cleared land needs to be prioritised
- The cost benefit between greater transmission costs versus locating in close proximity to existing facilities needs to be transparent.

2. **Impact on species - Warrikirti (greater bilby)**

I disagree and am deeply concerned by the proponent's assessment that *"there is not a real chance or possibility the Proposal would lead to a long-term decrease in the size of an important population of Greater Bilby"* and subsequent claim that the risk to bilby's is 'moderate'. This is a breathtaking claim for a 490 square kilometre of clearing in a bilby stronghold.

Environmental surveys at Muckaty Station recorded signs of Warrikiti at 53 sites, of which 33 sites were 'confirmed' and 20 sites were 'likely'. Warrikirti signs included 73 burrows, numerous diggings and a few scats and tracks. The applicant estimates the proposal will reduce the total bilby occupied suitable habitat by 1.75%.

The impact on bilbies warrants exclusion of this site as a suitable location.

3. **Impacts on birds, bats and insects**

Solar facilities impact fauna through habitat loss and fragmentation, altered microclimate, and creation of novel habitat. These impacts are major, complex and cannot be glossed over. For example, one study extrapolating from US data estimated 17,300,000 birds die per year on 37,886 square kilometres of solar panels, an average 456 birds per square kilometre. These figures cannot be directly translated to this extraordinary proposal of this scale, however these global averages suggest an order of hundreds of thousands of birds would typically die per year from 490 square kilometres of solar panels. This warrants extreme caution and the highest level of rigour in through the assessment process.[2]

[2] P.A. Fleming (2025) All that glitters – Review of solar facility impacts on fauna, Renewable and Sustainable Energy Reviews, https://doi.org/10.1016/j.rser.2025.115995 https://doi.org/10.1016/j.rser.2025.115995

The Lake Effect

Many animals, including insects and birds, have well-tuned polarisation vision and use the information from polarised light for navigation and to locate resources. Polarised light pollution i.e. “light that has undergone linear polarisation by reflecting off smooth, dark buildings, or other human-made objects” can represent an ecological trap for birds and insects.[3] Solar panels would also reflect moonlight, and reflected polarised light from panels could be perceived as waterbodies by bats[4].

Given the proximity of large wetlands frequented by migratory species like Lake Woods, and other regional wetlands like North-west Junction Swamp Bundara Swamp to the East, these risks must be taken seriously and understood with a high degree of certainty. If a genuinely precautionary approach were to be taken, exclusion zones would normally apply close to large wetlands.

Evidence also suggests increases in insect, bird and bat species richness and abundance around solar facilitates built over degraded landscapes but a decrease when comparison is made with relatively intact reference landscapes. ***The proponent has not but must explore opportunities to undertake this proposal on degraded/cleared landscapes.***

4. **Proximity and impact on Lake Woods and other regionally important wetlands and waterways**

Lake Woods is a designated site of conservation significance. The lake is about 26 km to the north of the proposal, however the southern extent of inundation during a flood appears to encroach to within about 13km from the proposal.

Lake Woods is an internationally significant wetland. It is important for waterbird migration, breeding and populations. At times it supports over 100,000 waterbirds[5].

Tomkinson Creek flows through the proposed clearing. It delivers water to Lake Woods. Solar arrays of this scale can be expected to change the size and velocity of stream flows, risking erosion and flooding; and carrying sediments and other pollutants to Lake Woods. Flood behaviour is further complicated by the Ghan railway running through the area. The details of these impacts need to be known now.

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[3] P.A. Fleming (2025) All that glitters – Review of solar facility impacts on fauna, Renewable and Sustainable Energy Reviews, https://doi.org/10.1016/j.rser.2025.115995 https://doi.org/10.1016/j.rser.2025.115995

[4] Polarization Sensitivity and insensitivity in bats G. Horváth (Ed.), Polarization vision and environmental polarized light (third ed.), Springer Series in vision research, Springer, Switzerland (2024), pp. 307-312)

[5] https://territorystories.nt.gov.au/10070/532083/0/3

5. **Avoidable GHG Emissions from land clearing**

If Greenhouse gas emissions from clearing are estimated at 100 tonnes/ha, then the clearing represents emissions in the order of 5,000,000 tonnes of completely avoidable emissions that will be incurred at a time when emissions are to be avoided. It will be too late when the land is revegetated in 70 years time. This risk should be avoided by locating the proposal on already cleared land.

It should be noted that the electricity generated is largely to meet electricity demand from new industries, not offset non-renewable electricity generation.

Conclusion

1. The project needs to be subjected to the highest level of environmental impact assessment by the NTEPA, maximising the opportunities for public input.
2. This project should be built on already cleared land, especially not in a bilby stronghold and close to an internationally significant wetland (Lake Woods).
3. The site selection process needs to be transparent.
4. The proposal needs to be linked to a serious reduction in our energy consumption.

Sincerely,

Adrian Tomlinson

Copies to:
Federal Minister for the Environment
Threatened Species Commissioner