FORMAL PLANNING OBJECTION

State Significant Development – Solar Energy System

State Environmental Planning Policy (Transport and Infrastructure) 2021

NSW Large-Scale Solar Energy Guideline (March 2023)

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1. Basis of Objection

I object to this development.

This objection is made pursuant to:

- **State Environmental Planning Policy (Transport and Infrastructure) 2021**, **Clause 2.42 – Solar Energy Systems**, and
- **NSW Large-Scale Solar Energy Guideline** (Department of Planning and Environment, March 2023)

Clause 2.42 requires the consent authority to consider whether a solar energy system:

- Avoids or minimises **land-use conflict**
- Is compatible with surrounding land uses
- Minimises impacts on **residential amenity, agricultural land, scenic quality and community wellbeing**
- Is appropriately located having regard to **regional cities and future growth**

The NSW Large-Scale Solar Energy Guideline reinforces these requirements, stating that solar development must be **appropriately sited**, **context-sensitive**, and **avoid unacceptable impacts on nearby residences and communities**.

This proposal fails to satisfy these mandatory considerations and should be refused.

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2. Incompatibility with the Regional City of Goulburn

(SEPP Clause 2.42(1); Solar Guideline – Site Selection and Context)

The proposed State Significant Solar Farm is located within the **Goulburn Regional City SEPP area**.

The NSW Large-Scale Solar Energy Guideline states that solar farms should:

- Be located where **land-use conflict can be avoided**
- Not compromise the **growth of regional cities**

- Be compatible with existing and approved land uses

This proposal:

- Introduces **industrial-scale infrastructure** into a rural-residential setting
- Is immediately adjacent to existing and approved residential land
- Constrains the future growth and land-use flexibility of Goulburn

The proposal is therefore inconsistent with **Clause 2.42(1)** and the Solar Guideline's site-selection principles.

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3. Failure to Avoid or Minimise Land-Use Conflict

(Clause 2.42(1)(a); Solar Guideline – Land Use Compatibility)

The Solar Guideline explicitly states that large-scale solar development should:

"Avoid significant land-use conflict, particularly with existing residential and rural-residential uses."

The proponent has failed to do so.

The scale, proximity and intensity of this development will result in:

- Ongoing conflict with residential and lifestyle land uses
- Loss of amenity and rural character
- Permanent reduction in land value and usability

The EIS does not demonstrate how these conflicts are avoided or minimised, contrary to both **Clause 2.42** and the Solar Guideline.

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4. Residential Amenity and Community Wellbeing

(Clause 2.42(1); Solar Guideline – Amenity, Noise and Human Health)

The Solar Guideline requires proponents to:

- Protect **residential amenity**
- Assess noise against **rural background levels**
- Consider impacts on **human health and wellbeing**

The proposal will cause:

- Continuous operational noise from the BESS and substation

- Long-term sleep disturbance and psychological stress
- Loss of rural quiet, a defining characteristic of the area

The EIS relies on **generic noise modelling**, which the Solar Guideline warns against where it does not reflect local conditions. Independent assessment indicates likely exceedances of acceptable limits.

The proposal fails to meet the Guideline's expectations for protecting residential amenity and wellbeing.

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5. Traffic and Access Impacts

(Clause 2.42(1); Solar Guideline – Transport and Access)

The Solar Guideline states that access routes must:

- Be suitable for heavy vehicles
- Avoid residential streets and sensitive land uses where possible
- Maintain safety for local communities

The proposal relies on **Gundary Lane**, a narrow rural laneway not designed for:

- Oversize or over-mass vehicles
- Construction traffic
- Ongoing industrial access

The EIS fails to adequately assess safety impacts, particularly for children accessing school buses. This is inconsistent with the Solar Guideline's transport and safety principles.

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6. Scenic Quality and Landscape Character

(Clause 2.42(1)(b); Solar Guideline – Visual Impact Assessment)

The Solar Guideline states that solar farms must:

- Minimise visual impacts
- Respect landscape character
- Avoid dominance in sensitive rural landscapes

The proposal includes:

- Approximately **1,850 acres** enclosed by security fencing
- Panels approximately **3 metres high**
- Industrial substations and BESS compounds
- Night-time lighting and glare

These impacts are inconsistent with the Southern Tablelands landscape and **fail to minimise visual and scenic impacts**, contrary to Clause 2.42 and the Solar Guideline.

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7. Agricultural Land and Contamination Risk

(Clause 2.42(1); Solar Guideline – Soil, Water and Agricultural Protection)

The Solar Guideline requires proponents to:

- Demonstrate protection of **soil and water resources**
- Address risks from panel damage, fire and extreme weather
- Ensure agricultural land remains viable

The EIS fails to adequately address:

- Long-term contamination risks
- Fire-related release of toxic materials
- Downstream impacts on waterways and livestock

Peer-reviewed research demonstrates potential for long-term leaching through damaged panels. Monitoring alone does not satisfy the Guideline's precautionary approach.

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8. Heat Island and Microclimate Effects

(Clause 2.42(1); Solar Guideline – Environmental Impacts)

The Solar Guideline requires assessment of **local environmental effects**.

Peer-reviewed studies show large solar farms can increase night-time temperatures by **3–4°C**. The EIS does not meaningfully assess:

- Heat retention over **760+ hectares**
- Downwind impacts on residences
- Combined effects with noise restricting night-time cooling

This omission represents a failure to adequately assess environmental impacts.

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9. Community Engagement and Social Licence

(Solar Guideline – Community Engagement)

The Solar Guideline emphasises:

"Early, genuine and ongoing engagement with affected communities."

The proponent has failed to achieve this, resulting in:

- Community division
- Loss of trust
- Social harm extending to children and schools

The lack of social licence is a significant planning consideration that has not been adequately addressed in the EIS.

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10. Cumulative Impacts

(Clause 2.42(1); Solar Guideline – Cumulative Assessment)

The Solar Guideline requires cumulative impacts to be assessed where multiple projects occur in proximity.

The EIS fails to adequately assess the combined impacts of:

- Gundary Solar
- Merino Solar
- Associated BESS and substations

Cumulative impacts on noise, traffic, visual amenity, mental health, agriculture and community cohesion are unacceptable.

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11. Conclusion

This proposal:

- Fails to satisfy **Clause 2.42** of the SEPP
- Is inconsistent with the **NSW Large-Scale Solar Energy Guideline**
- Is incompatible with its location

- Causes unacceptable cumulative impacts
- Lacks social licence
- Poses unacceptable risks to health, safety, wellbeing and agriculture

Consent should be refused.

DETAILED SUBMISSION

Our property is one of 194 Properties identified by the proponent as affected by this development, in addition to the whole City of Goulburn, and all residents required to drive on Windellama Road or Braidwood Road to access their property or place of employment**.**

Our property, zoned as Residential, a lifestyle block, is located on Gundary Lane, a small, purpose constructed rural laneway intended to support less than one dozen vehicle movements per day. Our property is also located within close proximity of the Gundary Solar proposal.

Our family have invested heavily in establishing a rural lifestyle, building and creating a home sanctuary. Our family purchased properties neighbouring my husband's parents to support a close family environment in a locality that has been in his family for over 100 years.

The culminative impact of both solar 'farm' proposals mean that our ability to safely live on, use or sell our land is significantly negatively impacted if the proposed development proceeds. We have invested in our rural lifestyle with an express purpose of living outdoors as much as possible – a situation that will be untenable with the noise, environmental disruption, traffic impact, safety impact with heavy truck movements, and overall mental wellbeing impacts expected from this solar proposal.

Fundamentally, the proposed development is in the wrong location. It should not be endorsed given the geographical location, volume of families directly impacted through the industrial scale project in a rural-residential area, within such close proximity to the Regional City of Goulburn.

Renewable Energy & Regional Cities SEPP mandates the consideration of land-use conflict, growth, and scenic impacts for projects near regional cities including Goulburn. This development severely and significantly impacts my family, my neighbours, my community and the City of Goulburn.

We would not have purchased and invested heavily in our property if we had known of any planned development in this area. The proposals (Merino and Gundary Solar

“farms”) have lacked communication, consultation, transparency or rural community support.

The proponent has failed to avoid significant conflict with existing and approved residential uses on land surrounding the development.

Our property on Gundary Lane is situated in a small, beautiful tree-lined laneway, planned and maintained by the original landholder with continued enhancement and upkeep by the current residents.

Nearly all our neighbours along Gundary Lane are opposed to this development, excluding those who have received a financial payment to endorse the project. In short, aside from the paid hosts, the entire community here is against this proposal.

The EIS indicates intention to use Gundary Lane as a location for ongoing access by Transgrid to the battery storage facility and sub-station. The EIS states that Gundary Lane is not a primary access point to the solar factory, however stipulates that Gundary Lane will be used by over-size, over-mass vehicles. There is no indication of the size, height or width of the transformers to be transported, nor the other construction materials that will rely on heavy haulage vehicles via Gundary Lane.

Gundary Lane turnoff location is hazardous, with poor/limited visibility associated with a risk before and after the laneway in both directions.

The laneway is intentionally narrow, and lined with beautiful, established trees. These trees impact visibility, particularly for residents as exiting driveways. Our small laneway provides significant lifestyle benefits for our family, with a safe location for leisure, recreation and exercise. I can run safely with minimal traffic, an activity that my children and I engage in at various times throughout the day/week.

Our children walk safely to and from the school bus, which uses Gundary Land as a turnaround point for children attending school in Goulburn. There are at least 6 school aged children living along Gundary Lane, between the ages of 1 and 13. Safe, reliable access to the school bus will be required for at least the next 15 years.

The ability to safely turn into Gundary Lane is compromised by the limited visibility and volume of traffic using Windellama Road. There is no space to pass or overtake while someone is turning. The school bus has vehicles backed up behind it while turning into the laneway, and limited visibility while engaging in the required 3-point turn after picking up or dropping of students. Adding oversized trucks to this narrow laneway places residents at an unacceptable risk. The location of the proposed access point at Gundary Lane, with limited visibility and a rise on each side of the turnoff, reduces viability of this access point.

It is suggested that access would be better located along a straight stretch of Windellama road, in the location where site access has been proposed and an

appropriate turning lane can be constructed. Better still, access from Braidwood road would reduce vehicle movements on Windellama Road, which has no shoulders, is narrow, winding, often with bike riders and heavy traffic on weekends, peak hours and holiday periods.

The assumptions and assessment provided in the EIS relating to noise appear woefully inaccurate. An independent report commissioned by Gundary residents affected by the Gundary Solar facility showed the general noise rating that are posted in the Gundary EIS are likely inaccurate, and very likely will be significantly louder than stated. Generic modelling has been used to show EDPR will be constructing "within limits". Residents are aware, following our independent reviews of evidence based on other solar factory construction and through the commissioned report, that EDPR are highly likely to exceed the acceptable noise limits for close residents. The same applies to the use of generic noise recommendations for the project, with indications that there will be frequent occasions when noise levels will exceed tolerable limits.

The wellbeing impact of noise cannot be underestimated. The anxiety, stress and economic pressures resulting from the proposal are already having an adverse impact on community members. Many of us purchased and built homes in this area explicitly because of the quiet rural ambience. The presence of continual noise associated with the battery storage and sub-station, as well as the noise generated over several years of construction has a detrimental impact on mental health.

The continual operation of cooling fans, inverters and transformers results in a buzzing/humming sound, and for people used to silence other than the occasional rural livestock call or vehicle movement, this is highly intrusive.

Sleep disturbance, stress, anxiety and irritability, cognitive performance and mood, depression can be outcomes associated with continuous noise. Physical symptoms including increased blood pressure and heart rate can also be seen.

Studies show 1.55x higher risk of anxiety, 1.23 x higher risk of depression given the annoyance associated with noise. Of particular concern for our community members and families, is the increased risk (119%) of general mental health problems in an environment when mental health and suicide are significantly higher for rural men.

In addition to the noise, the visual impact of the proposal will result in direct views across the landscape for all residents. The project entails enclosing ~1850 acres with security fencing. For residents within a few hundred metres, this means direct views of a long industrial chain-link fence, with rows of metal and glass panels visible above it (panels will be ~3 m tall). For other residents, they will also have direct and indirect views from their house and rural property locations. These elements are out of character in a regional, pastoral landscape across the Southern Tablelands.

The substation (32 ha) and BESS (~80 acre) compounds will have lighting at night for security, introducing light pollution (glow and glare) into an area known for clear night skies and starry nights. Even the perimeter fence may have lighting or at least reflect vehicle headlights.

The NSW Planning Large-Scale Solar Guideline FAQ (Mar 2023) states: “The metals in solar panels…cannot be easily released into the environment… the use of metals in solar panels has not been found to pose a risk… Panels would need to be ground to a fine dust to release contaminants.” The implication is that broken or weathered panels won’t leach toxins. There is no evidence to demonstrate that this position is accurate or correct over the long term.

A peer-reviewed 2021 study by University of Stuttgart researchers (“Leaching via Weak Spots in Photovoltaic Modules”) demonstrated that over time (>1 year exposure), significant amounts of toxic elements can leach out from solar panels through points of damage or degradation. They specifically found it is possible to leach all or most of certain (toxic) metals from panels given prolonged exposure – and they caution that short-term tests (1-day or 1-week) grossly underestimate leaching, which accelerates over months and years. This means that hail (such as that experienced in late January), lightning, or fire could crack panels and rainwater could leach out heavy metals like lead, cadmium, into the soil and waterways. Over 40 years and a million+ panels, this risk is real, not negligible. This is an unacceptable risk for the reproductive health of my children and future grandchildren. The proposal to ‘monitor’ this risk is unacceptable. Until studies contain clear, long-term evidence that there is NO impact on physical health, I strongly oppose the location of the solar panels, batteries and substation near my family.

Our family income is dependent on the productivity of our land. Whilst acknowledging the small scale of our acreage, the high productivity allows annual production of several hundred round bales of hay, as well as grazing for 30 head of cattle.

The information provided in the EIS does not adequately demonstrate that there is no risk of contamination, through leaching of heavy metals, toxic materials, and of particular concern, contamination after a fire.

Our dams and waterways across this area could become contaminated. Local farm dams eventually feed into creeks, the Mulwaree River, and even Sydney’s water catchment. There are stringent requirements we are required to obtain to breed, buy and sell livestock. Accredited livestock producers are obligated to pull their stock off contaminated pasture/water. This means if any contamination occurs, the surrounding agricultural use of land is compromised – animals cannot graze or be sold, and land value would plummet further. The proponent offers no persuasive contingency for this, other than assurances that it “won’t happen.” The evidence suggests otherwise.

There is no confidence that the EIS's stance of "no contamination risk" is accurate. This issue alone – the potential for long-term soil/water contamination – and the impact on human life, is enough to render the project fatally incompatible with this area's farming and rural lifestyle.

Large solar farms create localized heat-island effects. Panel arrays absorb and reradiate heat, and hinder cooling winds over the surface. Studies (including a 2016 Scientific Reports/Nature empirical study) have found night-time air temperatures over a solar farm were 3–4°C higher than in nearby natural areas – contrary to models that predicted cooling. Australia has no official study on this, but international examples indicate that on hot summer days our area could see a noticeable increase in ambient temperature for several hundred metres beyond the site. Our location, typically downwind (west of the sub-station and battery storage location), will have a direct impact from this heat.

This means hotter nights, additional heat stress in an already hot, dry climate. This effect wasn't meaningfully addressed in the EIS. Over 760 ha of panels, the heat retention could be substantial. The ability to open and air our house at night will be impacted by the expected noise resulting from the operation of the sub-station and battery storage facility. The "acceptable" noise levels of sound being quieter than a vacuum is unacceptable for rural community members who are used to no noise outside of rural livestock.

The ratings provided in the Impact assessment are severely understated.

It has been increasingly disappointing that the Merino Solar Factory Proposal, in addition to the Gundary Solar Factory Proposal, has resulted in a clear division within the Goulburn community.

Community members residing in the directly impacted area have attempted to form support groups to assist neighbours to understand and navigate the potential proposed and actual impacts of these solar factories.

The tactics employed by the proponent to offer financial incentives to some has created a sense of distrust within our small community.

The division also creates fractions between individuals who live in Goulburn city, with clear variation in the interest and impact of the proposal. Those not directly impacted appear unable to consider the broader implications for people who will have their physical space and sense of community negatively impacted. The "supporters" have branded people who are against the proposal as backwards, uneducated, obstructive, and worse.

There is no position being stated by many of our neighbours or ourselves that we are against renewable energy – our objection relates to the location and unacceptable impact on our families, lifestyle, economic prosperity and wellbeing.

The divisive nature of the topic has infiltrated my children's educational institutions. This has included a teacher telling a primary school student that she cannot talk about her concerns related to a solar farm, resulting in distress, anxiety and unhappiness associated with attending school. The lack of willingness by individuals to understand the other point of view has created disharmony across the region that will be difficult, if not impossible, to regain.