

To: Department of Planning and Environment

05 November 2022

Online lodgement by major projects planning portal

From: saveoursurroundings@outlook.com

Dear Ms/Sir

Subject: SSD-29508870: Birriwa Solar Farm

Save Our Surroundings (SOS) is a network of community groups across multiple states that share their experiences about, and research into, industrial wind, solar, BESS and pumped hydro proposed and developed projects and their impacts on affected individuals and regional communities.

SOS objects to the Birriwa Solar Works proposal for the following reasons:

Basic facts

1. Substantial emissions of carbon dioxide equivalents are embedded in all solar panels, lithium batteries and supporting infrastructure, as well as all the mining, processing, sea and land transport, special equipment, ongoing maintenance, and decommissioning and disposal, which studies show take years of intermittent electricity generation to offset. If manufactured in China, which is highly likely as 90% of solar panels are imported from China, the embedded CO₂e is the greatest. The project lacks transparency of this fact in their proposal. As they include estimated CO₂ savings numbers from the project they must also produce verifiable embedded CO₂e of their specific project. The DPE must request this information so the net emissions benefit can be assessed.
2. All proponents claim, using the same now outdated methodology, that their proposed project in Australia will reduce annual CO₂ emissions by 'x' tonnes/annum. Such claims cannot be true. Electricity generated from fossil fuels has been decreasing for many years as more non-fossil fuel generation plants have become operational. Therefore, each new proposed project must have a lesser CO₂ saving than each operating project. A point will be reached when each new wind project actually increases CO₂e as its embedded CO₂e cannot be offset by its future electricity production. In addition, the stated annual CO₂ saving is for the first full year of operation and therefore is not sustainable over the project's life as coal-fired plants are shut down and the solar and wind plants import spares, lubricating oil, replacement batteries and components from overseas, most likely from China, the world's largest emissions country and largest exporter of wind, solar and batteries in the world. The DPE must address this flaw in the Proponent's claim.
3. Historically, industrial electricity generating solar works operating in Australia only produce electricity well under 30% on average over a year. On occasions of too little daylight on cloudy or winter days, virtually no electricity is produced. In the CWO REZ the average amount of sunlight was 13.2% less from May 2019 to April 2022. Even less sunlight fell in the equivalent six months to October 2022, which was down by 21.5%. On occasions, several days in a row had very little sunlight. The proposed project therefore cannot claim to put downward pressure on electricity wholesale prices when over 70% of the time electricity has to be provided from an alternate and very expensive source, such as a non-existent super sized BESS or eventually some pumped hydro scheme. This explains why all countries or jurisdictions globally that have over 30% wind and solar in their electricity mix have amongst the highest retail electricity prices in the world. The DPE must ignore claims by the Proponent that lower electricity prices will result from their project.

4. It is well documented that slave labour is used to produce components used in wind turbines, solar panels and lithium batteries. For instance, children and adults in the Democratic Republic of Congo mine cobalt and copper using artisan methods, often resulting in their poor health and even death. China is the biggest buyer of cobalt and tracing artisanal mined cobalt from industrial mined cobalt is virtually impossible. This fact cannot be dismissed by statements saying the proponent will comply with Australian and State laws on modern slavery reporting. Where is their moral stand against slavery?
5. It is a fact that solar works destroy wildlife habitats, including some protected and some endangered animals and flora. The purchase of offsetting certificates does not address the large scale destruction of wildlife in the area in and around the proposed site. Over 50 species of animals have been recorded in just a 300 metre radius of the dwelling of just one property outside Gulgong town boundary. How many of these species of animals will be killed, driven out or locked out of the 13km² land that will be bulldozed and then surrounding by a high wire fence? The DPE should not ignore this destruction.
6. Statistically, some of the solar works will catch fire and possibly initiate catastrophic grass and bush fires resulting in property damage, and injury or death to animals and humans. Likewise Battery Energy Storage Systems catch fire and are extremely difficult to extinguish, as are turbine fires. Transmission lines, inverter and other electrical components can catch fire. All give off dangerous toxic gases, posing threats to first responders and nearby communities. Recent fires in and near the Beryl solar works demonstrate that even in relatively benign wet winter weather conditions it can still take all the available emergency resources, including three water bombing helicopters, from within a 35km radius of the fire to still take many hours to bring under control a 60ha grass fire from spreading into a solar works and nearby rural homes. The proposal does not and most likely cannot adequately address these risks. Assurances on this proven risk cannot be allowed to side-step this risk.
7. Solar panels are declared e-waste in Victoria, the EU and many other jurisdictions around the world. Solar panels deteriorate, get damaged and fail, resulting in the leaching of hazardous metals and toxins into the soil and waterways, whether in-situ or if disposed of in landfill, as is still the case in NSW. The lithium batteries are also declared hazardous items. No currently economic and satisfactory recycling and disposal of the toxic materials in solar panels and batteries exist in Australia, or indeed most of the world. Will the proponent put up an indexed multi-million dollar bond to cover the huge eventual cost of decommissioning, disposal, recycling, and land rehabilitation (is this even possible?) to prove its commitment to undertake such activities? The DPE should require a suitable bond to be lodged.
8. Despite the large size of Australia it only has 6% arable land. But this is being reduced by each wind, solar, BESS and pumped hydro project, which almost invariably are being built on agricultural land, as proposed in this case. The proponent appears to think land that is used primarily for cropping and grazing is somehow inferior to just covering the land with "glass". Cropping and grazing puts food on the table of most Australians as well as exporting to other countries. Continual loss of this land threatens the livelihood of people in agricultural towns, Australia's long-term ability to feed our growing population and that of other parts of the world. It poses a significant security risk to our country if we become dependent on others to feed us. This project proposal would occupy/destroy large areas of arable land and therefore add to the problem of diminishing agricultural land that could otherwise feed the generations of Australians to come and other people globally. The DPE must recognise this.

9. Australia currently imports about 90% of its solar and battery infrastructure and components from China. Dependency on China for replacement parts poses a sovereign security risk as our new electricity system will fail if such spares and replacements are withheld, restricted or made much more expensive because we will be a captive market. Collapse of our power system will cause untold destruction of our economy and the resulting dislocation of our society. Will the proponent categorically accept, with penalties, a condition that it will not buy Chinese made wind turbines, batteries or other critical components, such as inverters. The DPE must include this as a condition.

10. The proponent proposes to build an industrial solar works complex over a period of about three years. The construction of the solar works and associated infrastructure, together with potentially another 10 known proposed major projects (as per REZ Transmission Project map) will negatively impact the towns, residents, tourists, road users and road surfaces for many years, as much of the same route from Newcastle Port to the CWO REZ will be used. The 11 known major projects currently in planning/approved total a claimed combined installed capacity of 7,160MWac. These projects will depend on the proposed new 180km (++) 500/330kv transmission lines and energy hubs being built a few kilometres north of Gulgong and south of Dunedoo. The CWO REZ was to be a pilot ("guineapig") of up to 3,000MWac. Clearly, the cumulative negative impacts of so many concentrated projects for a decade or more will severely hurt Gulgong and Dunedoo property owners and townspeople the most. The DPE must reject this project proposal as it adds to already massive cumulative impact of the already existing/approved and proposed similar projects.

Conclusion

Clearly, the proponent's claims of emissions reductions and lowering of electricity prices is not supported with facts. Lowering CO2 emissions and electricity prices has not been achieved by any country or jurisdiction in the world. This proposed project should not be recommended for approval on these two facts alone, which is touted as the reason for solar and wind works to be built at all.

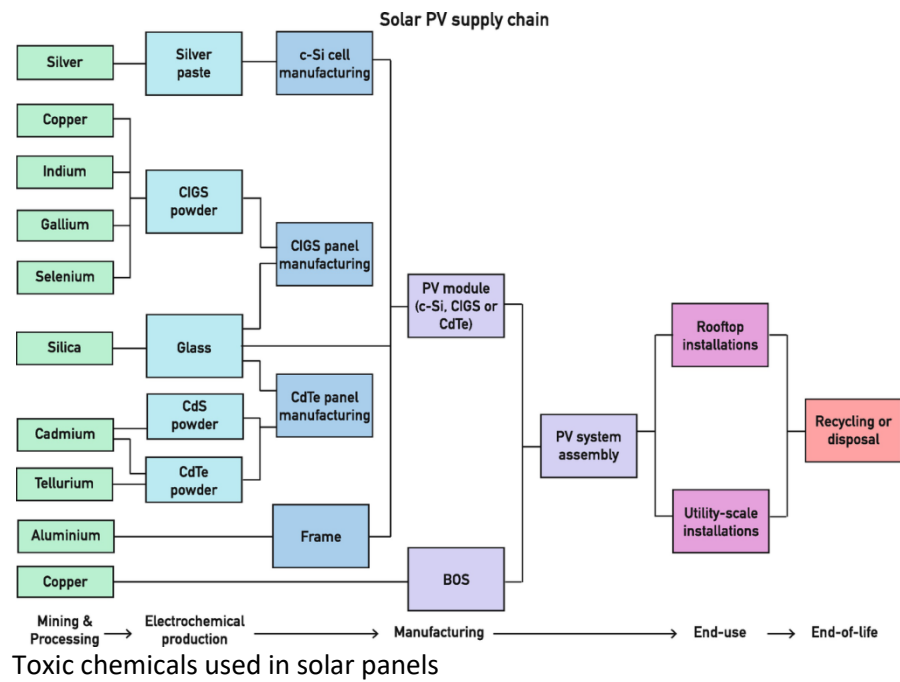
In addition, there are the issues of potentially facilitating the use of slave labour, the mass slaughter of wildlife and habitat destruction, the significantly increased fire risks, the unavoidable noise created, the contamination of the environment, the reduction in available agricultural land, the sovereign security risk of relying on virtually a single source of supply and the cumulative impacts of existing and future wind, solar, BESS and pumped hydro projects.

Taking just the foregoing into account the proposed project is "not fit for purpose" and must not be approved. Other countries now recognise these shortcomings and are now turning to better alternatives such as safe, long-life, 24/7 output electricity generation options, such as efficient low CO2 producing HELE plants, CCGT plants, nuclear reactors and in the near future small modular reactors.

Some drawbacks of solar works follow.

Yours Faithfully
Save Our Surroundings (SOS)

Just some drawbacks of solar works include:



Toxic chemicals used in solar panels



Damaged & end of life solar panels leach toxic chemicals: end up in landfill in NSW?



Mining lithium for batteries used in BESS



Child slave labour used in DRC for Batteries



Artisanal mining for cobalt & copper



Lots of km2 of farmland stripped of surface & fenced



Solar works burn & the smoke is toxic



Thanks to the hard work of firefighters, supported by water bombing aircraft, the Beryl Rd Fire is now contained. It is a timely reminder that,...

Beryl Rd fire (solar works at top) 26/08/2022

This



Or This over hundreds of km2 for decades?



There is a much better alternative



NuScale SMR requires a very small land footprint