

Gundary Solar Farm Project

Frequently Asked Questions

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General

Q: Who is Lightsource bp?

Lightsource bp is a global market leader in the development, funding, construction and long-term management of large-scale solar projects and smart energy solutions. It is a 50:50 joint venture with global energy company bp.

One thing that sets Lightsource bp apart from some other renewable energy developers in Australia is that it is an Integrated Power Producer (IPP), meaning that it owns its projects for the long term. As a long-term project owner, Lightsource bp works hard to engage with the communities it works within. We work closely with local businesses and individuals to deliver sustainable renewable energy projects in a manner that reduces impacts and increases local benefits.

Since entering the Australian market in 2018, Lightsource bp has developed a significant pipeline of large-scale solar projects across Australia. Lightsource bp currently has three projects under construction across NSW and QLD, including the Wellington, West Wyalong and Woolooga Solar Farms. Together these projects exceed over 500MWdc and, once operational, will make Lightsource bp one of the largest solar developers in Australia.

Q: Who is Umwelt?

Umwelt Australia is an independent environmental and social consultancy with over 25 years' experience providing speciality services in ecology, heritage, environmental planning, community engagement, and social impact assessment. Lightsource bp has engaged Umwelt to prepare the Environmental Impact Statement (EIS) for the Project, including the Social Impact Assessment (SIA).



Way of life, community and culture

Q: How will the local community benefit from this Project?

Lightsource bp is committed to being a responsible neighbour and engaging with the community in a proactive and effective manner. Should the Project be approved, it will be offering direct and indirect community benefits by providing local jobs, procurement, and construction contracts.

Lightsource bp is also investigating options for a Community Benefit Fund to distribute contributions to the area, including immediate neighbours and the larger community. Lightsource bp values your feedback and suggestions on priority areas in the community requiring support, as well as how the community may prefer to see such a fund administered. What the Community Benefit Fund will look like will be developed further during development of the EIS.

Further, Lightsource bp is investigating options to sell some of the power generated from the project to local organisations to enable the use of renewable energy locally.

Project location and lifecycle

Q: Why was this site chosen for the Project?

Lightsource bp considers multiple factors when choosing sites for its renewable energy projects. This includes proximity to existing transmission infrastructure, environmental constraints, consideration of social impacts, proximity to a population base with electricity consumption needs, and climatic factors including levels of irradiance (the amount energy available from the sun).

The Project site was chosen for several reasons. It has good access to existing transmission infrastructure, with a large high voltage (HV) transmission crossing the site. This means additional electricity lines will not need to be built to connect to the electricity grid. It is also close to population centres where energy is used, therefore reducing the amount of energy lost in transmission. The site has limited vegetation, and while currently used for agricultural purposes, is not classified as either Biophysical Strategic Agricultural Land (BSAL) or mapped as Class 1, 2 or 3 under the Land and Soil Capability Mapping for NSW. It is also located on a large property with less neighbours than a more densely populated location, therefore limiting the number of residents who would have views of the project. Finally, it has sufficient levels of solar irradiation – much higher than almost all of Europe and most of Victoria. The site is also relatively flat, allowing for easier construction.

Why is the Project proposed outside a Renewable Energy Zone (REZ) and is this permitted?

The REZ concept is still quite new with only NSW having formally announced REZs in 2020. Given that until recently no REZ existed, every renewable energy project constructed and approved to date in Australia, even those now geographically located in planned REZs, have been developed outside of the REZ process. Moreover, while policy makers are recommending proponents consider REZs as an option when looking to site new renewable energy projects, new projects are still allowed outside of REZs.

The Australian Energy Market Operator (AEMO), the independent organization which manages the National Energy Market (NEM) in Eastern Australia, recently released their draft **2022 Integrated Systems Plan (ISP)** setting out their 30-year plan for the development of the Australian Electrical system. In this document it stated that its most likely scenario required an additional 122GW of renewable energy generation, more than double the amount of the total generation in the NEM today, to meet Australia's growing demand for power and maintain Australia's energy security.

Development of renewable energy outside REZs is permissible and it will be essential for deployment to continue outside these zones if Australia's energy security is to be secured. Given that the Central West Orana REZ is only planned to accommodate another 3GW of new renewable energy, projects outside of the REZ are not only allowed but necessary to ensure Australia's continued energy security.

Lightsource bp locates and develops new projects based on stringent criteria, including but not limited to: proximity to power lines, local capacity and strength of the transmission network, avoidance of environmental constraints, areas of relatively low population and local irradiance levels. This includes projects both inside and out of REZ, all of which if built, will power Australia with green energy and ensure ongoing energy security for individuals, businesses and the nation.

Q: When will construction start, and how long will it take?

Subject to relevant approvals – including but not limited to development approval, grid connection and financing – construction would start in mid to late 2024. Due to the scale of the Project, the construction period is expected to take between 18 to 24 months.

Q: How long will the Project be operational and what decommissioning will take place?

Current plans propose that the Project will be operational for at least 35 years. At that time, Lightsource bp will either extend the project life using existing infrastructure, repower the site by replacing key components with new technology to improve energy generation, or decommission the Project.

When the Project is decommissioned, all infrastructure will be removed, and the land returned to its previous use. Lightsource bp has a partnership with Lotus Energy to manage the recycling of solar panels, including both at decommissioning and throughout the life of the Project, if damaged during construction or operations.

Local livelihoods and land use

Q: What opportunities are there for local job seekers, contractors, service providers and businesses to get involved in the Project?

The Project will create about 400 full time equivalent (FTE) jobs during construction and 2 to 4 ongoing FTE jobs during operation. As much as possible, Lightsource bp intends to source employment locally to maximise economic benefit for the local community.

Additionally, Lightsource bp plans to work closely with Goulburn Mulwaree Council and other key stakeholders to maximise local procurement and employment opportunities.

If you are interested in keeping up to date with opportunities, please register your interest at <https://www.lightsourcebp.com/au/projects/gundry-solar-farm/>. More details will be available as the project progresses.

Q: Where will construction materials for the Project be sourced?

Lightsource bp is focused on creating an ethical supply chain that focuses on the need for corporate social responsibility, to ensure all parts of its business are carried out in a way that treats its workers and the environment ethically.

Materials for the Project will be sourced both from Australian and international suppliers, including those located in Europe and Asia. Lightsource bp works to ensure that all its suppliers are passed through extensive checks, including investigation into our suppliers' environmental, social and governance practices before purchases are made.

Q: Will Lightsource bp be consulting with local industry groups?

As the Project planning and assessment process progresses, Lightsource bp plans to consult with a range of local stakeholders including near neighbours, landholders, industry groups, businesses, service providers, community and environmental organisations and broader community members.

Lightsource bp has already held meetings with many of these groups in recent months. As the EIS and SIA are further developed, additional consultation and feedback from local groups will be sought through a variety of mechanisms. This process will ensure that the extent of impacts and opportunities are fully understood, that local knowledge is incorporated in assessment studies, and that appropriate management and enhancement strategies are identified, where relevant, to address project impacts.

Q: Will Lightsource bp pay rates on the land as a rural land use or as a commercial land use?

Lightsource bp would pay rates as required by the Council for the use of the land as a solar farm.

Q: Will the Project put pressure on the rental market or short-term accommodation and increase property prices in Goulburn?

As construction is not likely to commence until 2024 at the earliest, impacts will be assessed as part of the Social Impact Assessment and will be based on anticipated likely future housing conditions.

Development consent would require an Employment and Workforce Accommodation Strategy to be developed to assess and respond to any accommodation pressures. This would be prepared prior to the commencement of construction so would be able to respond to the conditions at the time.

Q: How is solar panel efficiency and electricity output calculated?

The predicted efficiency and energy generation of the Project is calculated by Lightsource bp engineers using industry standard practices. The amount of energy available from solar irradiation, based on local climatic conditions, is obtained from third-party sources and on-site weather stations. Energy simulations are then run based on the design of the project and the local conditions to determine factors like efficiency and energy yield.

Q: Will this Project reduce the agricultural production of the region? What other land uses will occur on the site?

Lightsource bp currently has a 35-year lease on the land and intends to rotationally graze sheep on the site throughout operation, in line with current uses of the site. At the end of the 35-year lease, the lease may be extended, or all infrastructure will be removed and decommissioned, allowing the site to return to agricultural use.

Maintaining sheep grazing on the site through a leasing arrangement with a local sheep farmer has several benefits. It preserves the agricultural productivity of the site, and it also means grass levels are kept at levels that reduce fire risk. It also contributes to the local economy and regional food security. Lightsource bp is also exploring other agricultural land uses across sites including cropping and bee keeping.

The agricultural productivity of neighbouring and nearby properties will not be affected in any way.

Health and wellbeing

Q: Will Lightsource bp be considering the potential Electric and Magnetic Fields from the project, and how this may impact near neighbours?

Electric and magnetic fields (EMFs) are created by all forms of electrical equipment that generate, transport, or use electricity, but only if it is alternating current (AC). Most of the infrastructure at solar generating facilities, including the solar panels and most cables, produce direct current (DC) electricity, which does not produce EMF.

In a solar farm, the type of equipment that produces EMF includes inverters, transformers, AC cabling and the substation. All equipment produces EMFs at rates well below Australian and International standards. Further, EMFs drop off extremely rapidly with distance from the source. For substations and transformers, the magnetic fields at distances of 5-10m away are generally indistinguishable from typical background levels in the home.¹

Based on a recent in-depth review of the scientific literature, the World Health Organisation concluded that current evidence does not confirm the existence of any health consequences from exposure to low level electromagnetic fields.²

Any EMF generated from the Project infrastructure will be below Australian and International guidelines. Notwithstanding, a review of potential EMF risks associated with the Project will be undertaken as part of the EIS, and suitable safeguards and mitigation measures will be proposed to reduce any potential risks.

Surroundings

Q: How will visual impacts, including glint and glare, be assessed?

Solar panels are generally designed to absorb light and are therefore not highly reflective. Compared to other materials Photovoltaic solar panels reflect a very low percentage of sunlight.

Potential glint and glare and visual impacts from the Project, as well as mitigation strategies, will be assessed as part of the Landscape and Visual Impact Assessment to be prepared during the EIS phase. Visual assessment will be undertaken in line with the Large-Scale Solar Energy Guideline.³ Mitigation strategies may include visual screening using trees and adjusting the layout by relocation of panels to avoid areas of high visual impact. Lightsource bp is already actively looking into design options to reduce or eliminate views of infrastructure from nearby residences.

Photomontages illustrating views of the Project from multiple viewpoints and residences will be made available as part of the EIS phase to allow for further feedback and design refinement.

Q: How will Lightsource bp manage the impact upon local wildlife and bushland?

Preliminary ecological surveys as part of the scoping phase for the Project have been undertaken during March 2022 in accordance with the Biodiversity Assessment Method (BAM), approved by the NSW Government. Preliminary vegetation mapping has identified some plant community types (PCTs) present within the Project Area. A detailed Biodiversity Assessment will be completed for the Project as part of the EIS to refine vegetation mapping and assess any potential impacts that the Project may have on these ecological communities. This will involve further targeted and seasonal ecological surveys and consultation with the NSW Biodiversity Conservation and Science division. The Project layout will be designed to avoid impacts to high ecological constraints, where possible, and is already being designed to avoid the few areas deemed as highly environmentally sensitive. The layout will be subject to further review and refinement based on the outcome of the detailed biodiversity assessment. In addition, Lightsource bp intends to maintain the ability for continued rotational livestock grazing across the Project Area following construction, to preserve the existing agricultural land uses. Should the Project be approved, a Biodiversity Management Plan will be prepared and implemented to manage both livestock and feral animals (including wild dogs).

Q: Will heat or toxicity from the solar panels harm local wildlife?

No, solar is a passive technology which doesn't produce any harmful by-products. All electrical equipment used meets local regulatory standards.

Q: Has Lightsource bp considered the risk of bushfires for this Project?

During the preliminary assessment, it was determined that parts of the Project are located within bush fire prone land as identified by the Goulburn Mulwaree Council Bushfire Prone Land Mapping. A bushfire threat assessment will be undertaken as part of the EIS process, informing a Bush Fire Management Plan (BFMP) that will be developed in accordance with the requirements of the Planning for Bush Fire Protection 2019. Consultation with the Rural Fire Service (RFS) and/or NSW Fire and Rescue will also be undertaken during preparation of the BFMP. As part of the BFMP, Lightsource bp will continue to undertake vegetation management for the life of the Project.

Typical bushfire management strategies include on-site water tanks, establishment of an Asset Protection Zone and perimeter roads to serve as a fire break while providing access, strategic placement of access gates along the perimeter fence line, management of grass height and 24/7 automated monitoring of panels and electrical connections. In addition, 2 to 4 operational staff will be present at the site on a full-time basis, substantially increasing the amount of local oversight and management of the property from current levels.

Q: Is there noise generated by solar farms?

During operations, the project will generate very little noise. Solar panels do not generate any noise. Noise-generating equipment is limited to the motors used to rotate the panels to track the sun's location, which produce a soft 'ticking' noise, and inverters and the substation, which produce a faint 'hum.' A detailed noise impact assessment will be undertaken as part of the EIS to identify and assess any potential noise impacts as well as identify reasonable and feasible noise management and mitigation measures.

Q: Could the solar farm leak chemicals that could contaminate my property or the Sydney Water Catchment Management Area?

No. Solar Panels do not leak chemicals while in use and any chemicals used to manage agricultural use of the land will be in keeping with safe farming practices already used on properties throughout the area. In addition, all development within the Sydney Water Catchment Management Area must demonstrate that it will have a neutral or beneficial effect on water quality. Therefore, as part of the EIS process, a Neutral or Beneficial Effect (NorBE) Assessment on Water Quality will be undertaken for the Project, in accordance with the relevant policies and guidelines.

Q: How will Lightsource bp manage flooding on and around the Project site?

Flooding and hydrology will be considered as part of a detailed Water Resources Impact Assessment to be completed as part of the EIS. Lightsource bp and Umwelt are also meeting with surrounding landholders to hear more about site-specific water and flooding concerns. Outcomes of the Water Resources Impact Assessment will be used to inform the Project's detailed design which will specifically avoid any areas where flooding may possibly occur.

Q: Will the Project impact on the nearby airport?

Impacts from solar farms on airports are usually limited. As a result, solar farms located near airports are common and many airports are considering building, or have built, their own solar installations to generate electricity. The Goulburn Airport is located approximately 4km from the Project and as such the impact of the Project on the airport will be assessed as part of the EIS through traffic, visual impact and glint and glare assessments.

Q: Will the Project lead to deterioration of local roads?

A detailed Traffic Impact Assessment will be completed as part of the EIS, in consultation with Goulburn Mulwaree Council, which would identify any road upgrades required to the proposed transport route to accommodate the Project's construction traffic. Prior to construction commencing, any required road upgrades to the local road network would be undertaken. These upgrades would be followed by a dilapidation survey being undertaken to record the condition of the roads. During construction, Lightsource bp would be responsible for maintaining the condition of the roads along the local transport route, and would be responsible for fully restoring it to the condition recorded in the dilapidation survey following construction.

Engagement and decision making

Q: How can I get in touch with Lightsource bp and learn more about the project?

Lightsource bp encourages anyone who wishes to learn more about the project or would like to discuss potential project impacts, to please get in touch by either telephone, email or by filling out its community survey. Lightsource bp acknowledges that a proposed change to neighbouring land use can cause stress and anxiety, especially when there is uncertainty involved. Lightsource bp will ensure modes of communication are open, the assessment and design processes are as transparent as possible, and timelines are communicated clearly.

Intergenerational equity

Q: Do solar farms decrease property values and will Lightsource bp compensate me if they do?

There is no systematic research in Australia on the impacts of solar farms on property values. International evidence suggests that property value impacts are minimal and highly localised. While there has been no systematic research into solar farm impacts on property prices in Australia, a study commissioned by the NSW Office of Environmental and Heritage in 2016 on the impact of wind farms on property values concluded that 'windfarms may not significantly impact rural properties used for agricultural purposes'.⁴

There is no precedent for providing compensation to neighbouring landholders of solar farms in Australia. However, Lightsource bp is considering options for neighbour benefits as part of a broader Community Benefit Fund.

Assessment process

Q: Where is the project up to and what happens next?

The Gundry Solar Farm is still an early-stage proposal which is in the scoping stage of the development process. Lightsource bp is expecting to submit the Scoping Report in Q3 2022 to the NSW Department of Planning and Environment (DPE). The Scoping Report will include preliminary environmental assessments, a preliminary Social Impact Assessment (SIA) and a summary of stakeholder engagement conducted to date.

After the DPE reviews and evaluates the Scoping Report, if acceptable, the DPE will issue the Secretary Environmental Assessment Requirements (SEARs) for the Project, which set out detailed assessment requirements for the Environmental Impact Statement (EIS) phase.

Once Lightsource bp receives the SEARs, further technical assessment will be undertaken, with more detailed design and planning, and further SIA activities and stakeholder engagement, conducted.

Lightsource bp will share the findings from these technical assessments with the community prior to submitting the EIS to allow for feedback and to integrate local knowledge and suggestions into the Project design and planning. It is anticipated that the EIS would then be lodged with DPE in Q3 2023.

1. Australian Government, Australian Radiation Protection and Nuclear Safety Agency. (2022). Electricity and Health. Canberra. Available from: <https://www.arpsa.gov.au/understanding-radiation/radiation-sources/more-radiation-sources/electricity>
2. World Health Organisation. (2016). Radiation: electromagnetic fields. Available from: <https://www.who.int/news-room/questions-and-answers>
3. NSW Government. (2021). Draft Large-Scale Solar Energy Guideline. NSW Department of Planning and Environment. Available from: <https://www.planning.nsw.gov.au/Policy-and-Legislation/Renewable-Energy/Large-scale-Solar-Energy-Guideline>
4. Urbis. (2016). Review of the Impact of Wind Farms on Property Values. Urbis: Sydney. Available from: <https://www.environment.nsw.gov.au/resources/communities/wind-farm-value-impacts-report.pdf>

We are here

