

Solar In Your Community: Your Guide To The Process

About the Project

Who is EDP Renewables?

EDP Renewables (EDPR), is a global leader in the renewables space. ITP Development – the developer responsible for the Merino Solar Farm – was acquired by EDPR in December 2023. EDPR Australia is now the developer responsible for the Merino Solar Farm.

EDPR Australia is part of EDPR Asia-Pacific and more broadly, EDP Renewables (EDPR). EDPR has over 16.6 Gigawatts (GW) of renewable energy projects in operation globally, including many wind and solar projects.

Why Tirrannaville?

Careful consideration is needed to select the most appropriate site for a solar farm. The proposed site was chosen due to:

- Access to existing high voltage transmission networks (reducing the need for extensive transmission work upgrades)
- Limited vegetation due to historical grazing on the land, with land not being classified as Biophysical Strategic Agricultural Land (BSAL) or as Class 1, 2, or 3 under NSW land classification
- The site has good solar resources
- The site is close to Goulburn's local workforce (providing local employment opportunities) and other ancillary services such as lodging and food providers.

We understand there are a number of proposed energy developments in the region, and should you have any concerns regarding this, please contact us.

Why is this Project located outside of a Renewable Energy Zone (REZ)?

Renewable Energy Zones (REZ) are relatively new in Australia. REZs have been created by the NSW State Government as a planning tool to make sure that new energy infrastructure projects are matched with transmission and demand. These areas have been identified as areas where substantial transmission upgrades will be developed to allow for more energy input into the National Electricity Market (NEM) grid.

There is only so much grid capacity available within the

transmission within these REZ areas, so while these REZs are at the forefront of new renewable energy projects consideration, it is still allowable to locate energy projects outside these zones. Significant increases in renewable energy generation are needed to ensure future energy security, and projects outside of REZs are allowed and also necessary to meet this growing demand. The Merino Solar Farm is located in an area that has available grid capacity, has access to an existing transmission point, and does not require larger transmission upgrades.

What is being proposed?

EDPR Australia is pursuing development approval for a 450 MW, utility-scale solar farm and 450MW/1800 MW/hour battery energy storage system (BESS) located in the locality of Tirrannaville, 6 kilometres (km) south of Goulburn, NSW. The development footprint of the Project is 760 hectares (Ha).

What is the Project status?

The Merino Solar Farm received Secretary's Environmental Assessment Requirements (SEARs) in August 2023 and is now in the Environmental Impact Statement (EIS) phase of the NSW state significant development (SSD) application process.

Technical assessments are currently being undertaken and will be comprised within the EIS. Once complete, the EIS will be submitted to the Department of Planning, Housing and Infrastructure (DPHI), which is estimated to be in Q2 2025. It will be placed on public exhibition for a minimum of 28 days for community and agency comment.

A Response to Submissions Report will be completed following the exhibition period addressing comments received. Following this, the DPHI will determine the outcome of the project.

Who approves the Project?

As a state-significant project, the Project will be reviewed by the NSW Department of Planning,

Merino Solar Farm FAQ

Housing and Infrastructure (DPHI) who will provide final determination.

Why is the Project needed?

NSW has a 20-year renewable energy roadmap, with a goal to reduce emissions by 70% by 2035 compared to 2005 levels and increase NSW's uptake in renewable energy generation. This statewide initiative will create 6,300 construction and 2,800 ongoing jobs in regional Australia and will reduce electricity prices in the state by \$130 per year for households, \$430 for small businesses and reduce NSW's carbon emissions by approximately 90 million tons (NSW Government 2020).

Currently, the renewable energy generation into the National Energy Market in NSW is 36% (Energy NSW 2024), which includes large scale solar, hydro power stations, wind, and biomass power stations.

This project in NSW will contribute to achieving this target, create new jobs, and contribute to electricity price reduction and carbon emissions reduction.

How is energy created from the sun?

Solar panels harness sunlight and transform it into direct current (DC) electricity. Inverters then convert this power into alternating current (AC), which can be integrated into the electricity grid. From here, it is distributed to power homes and businesses through the National Energy Market (NEM).

What is a Battery Energy Storage System (BESS)?

A BESS is an energy storage system that uses a group of batteries to store electrical energy from a variety of sources. The system compensates for the intermittency of sources, providing backup power to address certain constraints such as weather conditions and lack of grid space. They are crucial to the increased adoption of dispersed energy sources and infrastructure.

How much energy will the Merino Farm produce?

The solar farm will produce approximately 1,095 GWh a year, enough to power around 193,400 homes (assuming average annual household consumption of 5,662 kWh) and offsets around 657,000 tonnes of CO₂-e pa (assuming grid Emissions Intensity of 0.6 tCO₂-e/MWh).

Environmental

What is the land currently used for?

A large portion of the land is currently being used for

sheep grazing operations. It is anticipated that sheep grazing will continue once the Project is operational.

What is the impact to agricultural land?

Agreements are in place with landholders to maintain the properties with agrisolar practices. This means existing sheep grazing can continue across a large portion of the project area.

Solar farm trials in the NSW Central West found sheep grazing within solar farms produced better wool – and more of it – in the five years since the project commenced.

A detailed agricultural impact assessment is being undertaken by an accredited agricultural consultant in accordance with the NSW Solar Energy Guideline (appendix A, Large Scale Solar Guideline NSW DPHI).

Will there be any visual impact?

The installation of solar panels will inevitably have some effect on the current look of the landscape. A Landscape and Visual Impact Assessment (LVIA) will be undertaken within the EIS, which will work to determine the visual impact of the solar farm.

EDPR Australia is committed to working closely with the local community to address any concerns and encourages the community to approach us with any issues that may arise.

Will glare be an issue?

The primary function of PV panels is to absorb sunlight rather than reflect it. The technical process in manufacturing PV panels includes anti-reflection, hydrophobic layers that minimise the potential for sunlight reflection. The Civilian Aviation Safety Authority (CASA) has approved projects close to the airport reporting that more glare is expected from the local waterways and the sun itself.

Glaring is not an issue for Solar Farms, as evidenced by the fact that solar panels have been deployed in many areas such as Residential, Industrial and Sensitive Facilities, and are even present in airports around the world, including Ballarat, Adelaide, Brisbane, Changi (Singapore), Denver and Dusseldorf (and many more).

What is the lifespan of a solar farm?

EDPR Australia has applied for a Project term length of 30 years. After this period of time, EDPR Australia can apply to the NSW DPHI (or equivalent) to refurbish the site at the end of the operational life of

the components. Should this not be granted, or EDPR Australia opts to not extend the life of the project, it will be decommissioned.

The decommissioning process is a critical part of the development application process, and a decommissioning plan must be included for the development to be considered. At the end of life, the solar panels will be removed and decommissioned. The land will be rehabilitated and returned to its original use.

Do solar farms impact native flora and fauna?

EDPR Australia has engaged expert consultants who will undertake flora and fauna surveys to understand the ecological characteristics of the site. They are committed to minimising impacts on native flora and fauna by designing the project to allow species to continue to thrive during the construction and operation phases. During these phases, management plans will be developed to ensure this compliance is maintained.

Will Cultural Heritage be preserved and protected?

Preserving and protecting Cultural Heritage is a priority for the Project and EDPR Australia is committed to adhering to all legislation to achieve this.

An Aboriginal Cultural Heritage Assessment (ACHA), which includes field surveys, is required as part of the EIS process. This will include rigorous community engagement with Registered Aboriginal Parties (RAPs) and other community members throughout the community engagement process to ensure due diligence and maintain strong relationships and respect with First Nations peoples and cultures.

Construction

When will construction begin and how long will construction take?

The construction start date is dependent on a variety of factors, including DPHI approval. It is anticipated that construction will take approximately 24 months.

Will there be noise impact?

As part of our EIS process, a detailed noise assessment will be completed for both the construction and operation phases of the Project. Outcomes of these assessments will be shared.

Additionally, working hours will be dictated by the project planning approval and the NSW Environmental Protection Authority (EPA) guidelines. This outlines no work to be undertaken at night, on Sundays, or public

holidays without prior approval or consultation with neighbours.

Will there be increased traffic?

During the construction period, both light and heavy vehicles will access the site during working hours to deliver both equipment and workers to the site. Once operational, the site will generate very low levels of traffic.

As part of the EIS phase, a detailed traffic assessment will be prepared that will assess the impacts of construction traffic, including the considerations associated with intersections and delivery routes.

How will construction traffic and road impacts be managed?

Access to the development site is anticipated to be from a new access road that will be constructed as part of the Project. During the anticipated 24-month construction period, construction vehicles would range from light vehicles to 26 m B-Doubles. Light vehicles would arrive during AM/PM peaks with heavy vehicle deliveries to be spaced out during the day.

In NSW, the Environment Protection Authority (EPA) regulates construction noise hours as 7 AM–6 PM Monday – Friday and 8 AM–1 PM on Saturday. There is no construction work permitted on Sundays or public holidays.

Safety

Is the Project a fire risk?

Solar panels pose a low fire risk and rarely cause a fire independently. EDPR Australia will work closely with the RFS and NSW Fire and Rescue to confirm access requirements for the Solar Farm if there is a bushfire that moves into the area, or if a fire starts in the solar farm.

The BESS would be designed in accordance with the relevant Australian and international standards, with fire mitigation incorporated into the design to ensure its safe operation and minimise fire risk.

The Project will be equipped with a Supervisory Control and Data Acquisition (SCADA) and a Battery Management System (BMS) to monitor for faults in real-time, including smoke and system temperatures.

The BMS main role is to prevent damage to the battery cells from over-charging and over-discharging and to maintain the charge within the cells in the optimal performance range.

If the BMS detects any abnormal conditions, it shuts the battery down. This protects the cells from damage. Importantly, the BMS can act to shut a battery down before it reaches a point where it becomes a safety hazard.

Management plans are produced when a project is approved (prior to commencement). This includes a Fire Management Plan to address the management of potential fires during construction, operations and decommissioning.

EDPR Australia will also:

- Adopt the RFS 'Planning for Bushfire Protection 2019' guidelines
- Build according to safe and effective bushfire safety designs
- Assess the risk in line with State and agency requirements
- Have fire suppression systems in place
- Have SafeWork NSW undertake regular site visits.

Are there health risks associated with living near a solar farm?

The use of electricity in daily life exposes us to low frequency electromagnetic fields (EMF) and are not considered a risk to human health (NSW Government 2022). EMF from solar arrays is typically less than household appliances and are not distinguishable from background levels at the site boundary.

Your kitchen stove has an EMF range of 2–30 milligauss (mG) and your hairdryer 1–70mG. Standing at the edge of a transmission powerline easement would be in the range of 10–50mG, and under a transmission powerline 20–200mG.

The current international standard for human exposure to limit EMF set up the International Commission of Non-Ionizing Radiation Protection (ICNIRP) is 2000mG (NSW Government 2022).

Community

How many jobs will be created by the Project?

The Project would bring direct employment opportunities, with 200–300 full-time equivalent jobs expected during its up to 24-month construction period, and 4 permanent roles when in operation.

What are the benefits for the community and key stakeholders?

The solar farm will provide benefits through job creation and will provide an economic injection to the region using local services such as food, lodging, construction materials and tourism for the local area.

The Project will also provide benefits through a Community Benefit Sharing program, and feedback gathered through the EIS period will help to inform what initiatives might benefit from the program.

Will my land be devalued?

There is currently no documented evidence of land devaluation related to solar farms in the area. As part of the EIS phase, we will prepare impressions for our neighbours to understand what the future outlook may be should the Project be approved.

Will the Project impact my public liability insurance?

The expansion of renewable energy across regional Australia has presented a growing trend of landowners either hosting or neighbouring both small and large-scale energy infrastructure.

Concerns regarding public liability insurance offering coverage in the rare event of natural disasters has become more prevalent as the renewables industry continues to grow.

There have been no previous examples of this issue to date, however, the Insurance Council of Australia has advised landowners to engage with their insurer or insurance broker to understand their cover, and to discuss any concerns regarding this matter with the Project team.

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