MAULES CREEK SOLAR FARM
FREQUENTLY ASKED QUESTIONS

The future happens here

GENERAL

Q What is proposed?

A FRV is proposing to construct and operate a solar farm (up to 120 MW) and Battery Energy Storage System (up to 150 MW) for the purposes of providing a critical new source of clean energy for New South Wales. The solar farm will be capable of supplying renewable energy for approximately 40,000 homes across the state.

Q Who is FRV?

A FRV Services Australia (FRV) is a highly experienced and capable solar farm developer. FRV has developed 1.6 gigawatts (GW) of renewable energy projects globally and our current portfolio of solar farms in Australia includes:

- Royalla Solar Farm – 24 MW – Operational since 2015
- Moree Solar Farm – 70 MW – Operational since 2016
- Clare Solar Farm – 125 MW – Operational since 2017
- Lilyvale Solar Farm – 125 MW – Operational since 2019
- Goonumbla Solar Farm – 83.7 MW – Operational since 2020
- Winton Solar Farm – 106 MW – Operational since 2021
- Sebastopol Solar Farm – 90 MW – Operational since 2022
- Metz Solar Farm - 115 MW – Operational since 2022
- Walla Walla Solar Farm – 300 MW – Under Construction
- Chaff Mill Solar Farm – 125 MW – Development Approval Received
- Bluewater Solar Farm – 80 MW – Development Approval Received
- Ravenswood Solar Farm – 63 MW - Development Approval Received
- Terang Battery Energy Storage – 50 MW– Development Approval Received
- Gnarwarre Battery Energy Storage – 220 MW – Development Approval Received
- Fosterville Solar Farm 100 MW – Development Approval Received

The future happens here

Q Why Narrabri?

The biggest constraint that renewable energy developers face is finding suitable land close to a transmission line that can handle additional load from the generation of electricity.

FRV plans to connect this solar farm to the existing 132 kV Narrabri to Tamworth overhead transmission line, which is owned and operated by Service Provider TransGrid. This powerline crosses through the Maules Creek Solar Farm site.

Narrabri has a small but growing renewable energy industry. Projects such as the Maules Creek Solar Farm will help with the region's growth, as it transitions from fossil fuels and diversifies its local economy.

Q When will construction commence and how long will construction take?

The construction start date is dependent on a variety of factors, including receiving planning approval, approval from Transgrid, negotiation of a Power Purchase Agreement and completion of the project financing. Once those milestones are achieved and construction contractors are appointed, works on site would likely take approximately 14 months.

Q Will FRV stay on as the project owner?

A FRV develops solar energy projects to own and operate for the long-term. While FRV have sold some assets in the past, our core business is retaining assets as this provides us with a sustainable return on investment and ensures we manage the running of our solar farms directly. For us, it is important that our assets are operated responsibly and perform well over their lifetime.

Q How long will this project operate for?

A Typically, it is expected that solar farms being constructed today will operate for about 35 years. After 35 years, the site would either be rehabilitated back to farmland or the land may be reutilised and infrastructure upgraded, subject to landowner agreements and planning approvals.

PLANNING APPROVALS

Q What stage is this project at?

A In September 2023, Maules Creek Solar Farm received environmental assessment requirements (SEARs) from the NSW Department of Planning to enable completion of an Environmental Impact Statement (EIS).

FRV has also commenced engaging with the local community regarding the proposal, and community engagement will continue throughout all stages of project development.

FRV plans to lodge a Development Application to the NSW Department of Planning and Environment (DPE) in mid-2024. If the project receives development consent, FRV will oversee construction by a subcontractor and will own and operate the solar farm.

The future happens here

Q What is an Environmental Impact Statement

A The objective of the EIS is to ensure that any environmental, social and economic impacts of the project are identified and assessed; and to recommend mitigation measures to avoid and minimise any adverse impacts. FRV is currently undertaking these detailed assessments to help shape the overall design of the project. The EIS will consider issues such as:

- Biodiversity
- Agriculture
- Noise
- Social Impacts
- Heritage
- Landscape and Visual
- Water
- Economic Impacts
- Land Use
- Traffic and Transport
- Potential Hazards (incl Bushfire)
- Waste and Rehabilitation

Q What is the planning process for the project?

The Maules Creek Solar Farm is considered a State Significant Development (SSD) due to its economic value.

As the project is considered SSD, it will be subject to a rigorous assessment by the NSW Department of Planning with inputs from relevant government agencies, including Narrabri Council.

The local community will have the opportunity to have their say on the project once a Development Application is lodged with the NSW Department of Planning, and the project is placed on public exhibition.

DESIGN CONSIDERATIONS

Q Why has this specific site been chosen?

A A combination of conditions needs to be analysed when choosing an appropriate solar farm site. The choice of this location for Maules Creek Solar Farm is driven by a combination of:

- Excellent solar irradiation
- Low level of environmental impact – the site has been largely cleared and heavily disturbed by previous cultivation and cropping
- Level terrain for cost effective construction
- Ideal location on the national electricity grid for exporting the solar farm's electricity into the existing network
- Excellent access to local and major roads

Most suitable sites present some degree of restrictions such as creek lines, vegetation to be retained, etc. FRV is undertaking a thorough environmental assessment to ensure that the existing environmental limitations would not be impacted by the proposed solar farm.

FRV have successfully developed projects across Australia with similar restrictions to those on the Maules Creek Solar Farm site.

The future happens here

Q What about the impact on agricultural land?

A FRV acknowledges that the Narrabri region is recognised across Australia for its fertile soils, and that the potential use of agricultural land for a solar farm may be a concern of some within the community. The Maules Creek Solar Farm site is currently used for grazing, with very limited capability for sustained crop production. The site, which is about 300 hectares in size, represents a fraction of the available grazing land in the region. The proposed solar farm would also represent a temporary use of the land. After the solar farm's operational life, the solar farm would be decommissioned and the site would be returned to grazing land.

The solar panels would not occupy a large surface area within the site, which means that pasture continues to grow within the solar farm. FRV has many operational solar farms where managed grazing of sheep can continue on the site, without any health or safety risks to livestock.

Despite the above, FRV will complete a thorough assessment of the solar farm's potential impacts on agriculture in the region before we consider submitting a Development Application for the project.

Sheep grazing at FRV's operational Lilyvale Solar Farm.

Q What steps will be taken to minimise the clearing of native vegetation?

One of the reasons why FRV considers that the proposed site is suitable for a solar farm is because it has already been largely cleared of native vegetation for grazing, meaning that adverse impacts on biodiversity are unlikely.

Whilst it is likely that the project will require the removal of some isolated paddock trees, there would be no widespread clearing of native woodland. These minor impacts are unavoidable and will be entirely offset in accordance with NSW environmental law and regulations.

As part of our detailed environmental studies, FRV has arranged for ecologists to undertake extensive surveys within the site to confirm the absence of any endangered species within the site.

TECHNICAL

Q What type of panels will be used?

A The latest technology solar photovoltaic (PV) panels will be used on this project. These will be mounted on single axis trackers, which means that they change their orientation throughout the day to follow the

sun from sunrise to sunset. This helps to maximise the energy captured, and maximise the production of clean, renewable energy.

Q How high will the panels be?

A Panels will be installed on low-lying structures expected to not exceed 5.5m above the natural ground level – a similar height to other existing features in the landscape, such as farm sheds.

Q Do solar panels cause glare?

A Solar panels are designed to absorb sunlight, not to reflect it. The cells in solar panels are covered in an anti-reflective coating and only reflect a small amount of the sunlight that falls on them. Typically, you would experience more glare from other everyday objects like water surfaces and the glass windows on your home, than you would from solar panels.

FRV will complete a detailed visual assessment before we consider submitting a Development Application for the project, to give the community and near-neighbours peace-of-mind that the potential visual impacts would be negligible.

Q Will the site contain a battery?

A Maules Creek Solar Farm is expected to include either a two or a four hour Battery Energy Storage System (BESS) with an output of up to 150 MW to support the local electricity network.

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

A No.

Many Australian homes, airports, schools, hospitals, aged care homes have the same type of solar panels installed on their roofs. You may also have solar panels installed on your home, which operate in very much the same way.

The operation of a solar panel generates no emissions such as CO_2 or any other harmful gases. There are no known situations in which being near a solar farm can adversely impact your health and this has been demonstrated by the thousands of solar farms installed throughout the world.

ENVIRONMENTAL

Q Will livestock and crops be impacted by a 'heat island' effect?

Solar farms are not 'thermally massive', and panels are only around 5 cm thick. This means that there is no significant structure bulky enough to absorb and radiate an unsafe level of heat. Because Maules Creek Solar Farm will use fixed-axis tracking, it means it won't be possible for any heat to get 'trapped' underneath panels. The rows of panels are also typically installed up to 15 m apart.

Studies have shown that at distances of greater than 30 m there is no noticeable difference in ambient

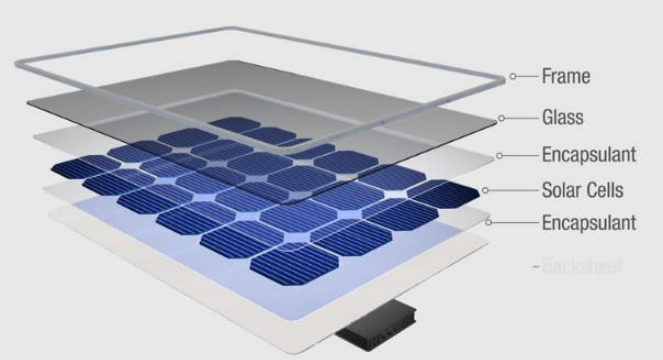
temperature. The air immediately above a solar farm can sometimes be slightly warmer than the ambient air temperature, but the temperature difference is typically less than you would experience at a shopping centre car park on a warm day.

Around the world and in Australia, sheep safely graze **within** solar farms. Livestock and crops – including those proposed to be within the Maules Creek Solar Farm site during operations - will not be impacted as the design of the solar farm will ensure no significant build-up of heat at the site. Likewise, animals and crops on neighbouring properties will not be affected.

Q Will the solar farm cause contamination in the soil?

No. The solar panels that would be used on the site are the same type of solar panels used on household roofs across Australia. The solar cells are composed of thin silicon wafers, that are made of refined silicon dioxide – which is the same material as sand or quartz, used in making glass.

The solar panels are also sealed, which means that they are fully contained to outside elements. Any damaged or broken panels would be quickly replaced by the dedicated site staff.



A typical cross section of a silicon solar panel

SOCIAL AND ECONOMIC

Q How many jobs will be created by the construction of the Solar Farm?

A Employment opportunities will range from skilled to manual labour. At the peak of construction, FRV estimates the project will employ 150 people.

Utilising qualified local contractors is always a key element for FRV when developing a project. FRV is keen to work with local service and product suppliers to stimulate the local economy. We strongly encourage local individuals to put forward their interest in employment either for labouring or as a supplier via our website.

Q How many jobs will be available during operations of the Solar Farm?

A We estimate that the solar farm would directly employ 4 to 5 full time employees on a permanent basis. This is in addition to the maintenance contracts that would be required for tasks such as panel cleaning, fence repair, road grading, etc. FRV would rely on local contractors or service providers for these tasks.

The future happens here

Q Other than jobs, what other benefits will the community receive?

A As owners and operators of the solar farm for up to 35 years, FRV would be a part of the local community. FRV is committed to continuing to engage and update all stakeholders that have interest in – or may be impacted by – the Maules Creek Solar Farm project.

Benefits in addition to job creation include potential road or intersection upgrades, contributions to community projects and the delivery of clean, zero emissions electricity to meet the region's energy needs.

Q Will there be a contact onsite at all times in case of emergency?

A The plant is fully maintained throughout the life of the solar farm. There will be a 24/7 contact. An Operations Manager and other staff members will be based in close proximity to the solar farm. The Solar Farm will also be monitored 24/7 by remote CCTV.

Q What is a Power Purchase Agreement (PPA)?

A A power purchase agreement or a PPA is simply a contract to buy power at a specific the price.

The 'Seller' in this type of agreement is usually a utility scale generator e.g., Solar and Wind Farms. The 'Purchaser' in this type of agreement will have significant electricity requirements which allows them to purchase all or some of the output of a project.

Examples of buyers include utilities, governments, and major corporates. Examples of companies which have entered into PPAs across Australia include Telstra, Mars, Blue Scope Steel, Snowy Hydro, UNSW, and Coles, with many others considering this option.

Q Will there be any traffic impacts associated with the Project?

A During the construction period there is likely to be an increase in traffic on local roads while materials are being transported to site. These impacts will be limited to the construction period, and are likely to be short in duration.

Once the solar farm is operational, there would not be any noticeable impact on traffic, with the only traffic being associated with the 4 – 5 full time employees, occasional contractors or deliveries.

As part of the EIS, we are undertaking a detailed traffic assessment in consultation with the community and Narrabri Council so that we can reduce any traffic impacts as far as possible. The EIS will include detailed information on the expected traffic impacts, mitigation measures and details of how the project will be integrated within the existing transport network.