



MORGAN
SOLAR FARM



MORGAN SOLAR&BATTERY PROJECT **PROJECT OVERVIEW**

September, 2023



GREEN GOLD
ENERGY



Project Developer

Green Gold Energy is a company providing turnkey solutions for **SOLAR +** Projects. We specialise in development, engineering, construction, operation and general contracting of the projects. The **SOLAR+** projects are designed for renewable energy that combine solar power generation with BESS, Micro-grid, Hydrogen, EV Charge Station and Data Center.

Since its inception, Green Gold Energy has maintained close ties with local government and network providers and has become a pioneer in the field of the renewable energy industry in South Australia, Victoria and New South Wales.



70+

Solar+ Projects
under development



20+

Projects
commissioned



1.2GW

Pipeline of Solar



2 GWh

Pipeline of BESS



10 Million

Square Metres of Land
Has Been Renovated



1.2 Million

Tonnes of Carbon
Emission Has Been Saved

About the Project

The Morgan Solar & Battery Energy Storage System (BESS) project consists of 130MWdc Solar and 91.7MWh of BESS over a 622-hectare block of land situated in Mid Murray Council located in the Stuart region.

The block of land has been secured by the project owner since 2022. The Morgan project is expected to draw in an investment value of over \$185 Million and will create employment opportunities over the 18-month construction period. The project is expected to be shovel-ready by the end of 2024. Green Gold Energy are also investigating future development opportunities for production of green hydrogen on the site.

Project Milestones

CA STAGE (Connection Agreement Process)	DA STAGE (Development Authorisation Process)
<ul style="list-style-type: none"> ✓ Completion of Connections Option Report 	<ul style="list-style-type: none"> ✓ Crown Sponsorship Obtained
<ul style="list-style-type: none"> ✓ Submission of Connection Enquiry Report 	<ul style="list-style-type: none"> ✓ Environmental Reports Complete
<ul style="list-style-type: none"> ■ Grid Performance Study & Submission of Connection Application 	<ul style="list-style-type: none"> ■ Submission of development application to State Planning Commission
<ul style="list-style-type: none"> ■ Generator performance Standard agreed 	<ul style="list-style-type: none"> ■ Formal public notification of application
<ul style="list-style-type: none"> ■ Full Impact Assessment Completion 	<ul style="list-style-type: none"> ■ Consideration of application by State Commission Assessment Panel
<ul style="list-style-type: none"> ■ NER 5.3.4 Approval 	<ul style="list-style-type: none"> ■ Decision by the Minister for Planning
<ul style="list-style-type: none"> ■ Execution of Connection Agreement 	<ul style="list-style-type: none"> ■ Development authorisation
<p>Ready to Build</p>	



Facts



167,000 tonnes of carbon emissions saved per year, equivalent to taking over 60,300 cars off the road



108MW installation capable of generating 259,897MWh of electricity per year



Equivalent to the annual energy needs of **47,400 houses** assuming an average daily house consumption of 15kWh



Approximately **622 hectares** of land



Approximately **175 hectares** of native vegetation to be retained



200 construction jobs brought to the region



5 to 7 ongoing contractor jobs



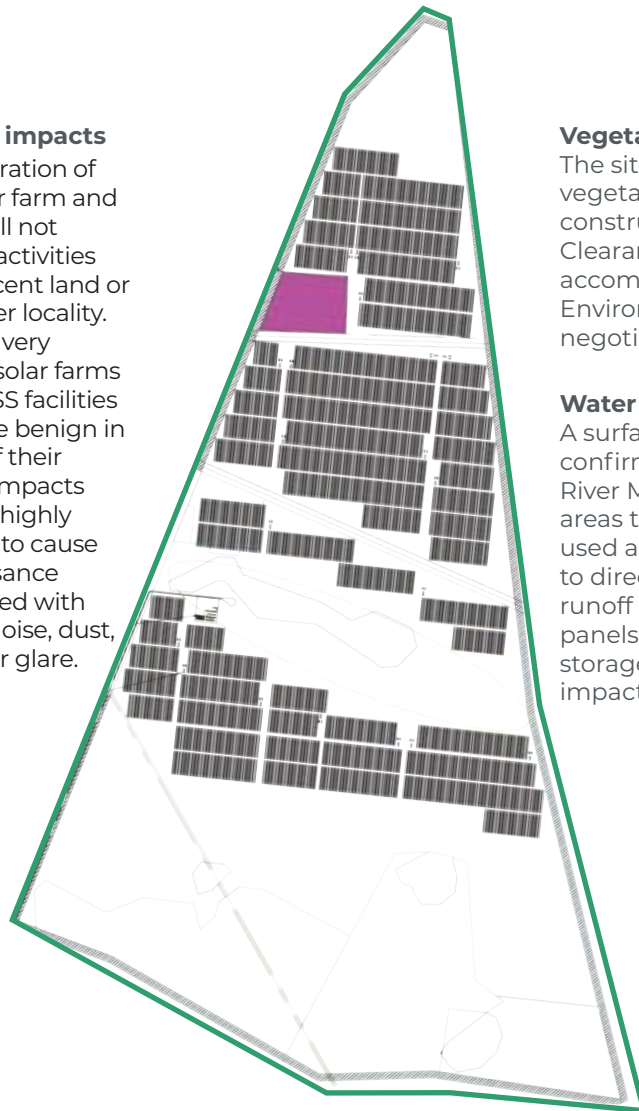
THE PROPOSAL

Proposed solar installation for Lot 104 Goyder Highway, Stuart

The project will be executed with a capacity of 110MW, complemented by a DC-coupled battery system.

Off-site impacts

The operation of the solar farm and BESS will not disturb activities on adjacent land or the wider locality. By their very nature, solar farms and BESS facilities are quite benign in terms of their off-site impacts and are highly unlikely to cause any nuisance associated with way of noise, dust, fumes or glare.






Vegetation

The site contains some important stands of native vegetation that will be retained and protected during construction and operation of the proposed solar farm. Clearance of some native vegetation will be required to accommodate the solar panels with a suitable Significant Environmental Benefit to offset this clearance to be negotiated with the Native Vegetation Council.

Water

A surface water assessment has been completed which confirms that the site is not at risk of flooding from the River Murray. However, the site contains several low-lying areas that are subject to inundation. These areas will be used as water storages with shallow swales to be installed to direct runoff to these storages in order to constrain runoff to pre-development levels. The layout of solar panels has been designed to accommodate the water storage areas and swales to prevent any off-site flooding impacts.

NOTES:

-  PROPOSED PV ARRAY
-  INVERTER
-  BATTERIES

Aboriginal Heritage

Under the Aboriginal Heritage Act 1988, we are required to take all reasonable measures to ensure that the solar farm development has no adverse impact on Aboriginal cultural heritage. A desktop study and risk assessment of the site has been completed, indicating that there are no listed items of cultural heritage significance on the site and there is, as a result, a very low risk of project works encountering Aboriginal heritage items.

Traffic

A traffic assessment for the project recommends that access to the site occur via Goyder Highway with a new access point to be constructed from an existing road reserve on the south-west corner of the site. Both the route proposed to be utilised during construction and new access point will be reviewed by the Mid Murray Council and the Department of Planning, Transport and Infrastructure (DPTI) as part of the development application assessment.

Project assessment

The proposed solar farm is to be assessed by the State Commission Assessment Panel against the relevant provisions of the Mid Murray Development Plan. Council will be provided with an opportunity to comment on the proposal and Green Gold Energy will continue to liaise with Council's planning and infrastructure staff to ensure they are informed of project status.

Grid connection

A substation will be constructed as part of the solar farm and is to be located adjacent the existing high voltage transmission line to minimise the need for additional overhead lines to connect into the grid. Green Gold Energy has obtained approval from the Office of the Technical Regulator for the project.

Frequently Asked Questions

Why is this project important?

Solar is a passive form of technology, generating electricity without creating any waste products or pollution during operation. This makes it an ideal energy source for South Australia where the State government has committed to securing 50% of its total energy needs from renewables by 2025. This project will make an important contribution to achieving this target while substantially reducing carbon emissions and diversifying our energy mix. The inclusion of the BESS provides for the storage of energy and its distribution to the national grid at times of highest demand.

Can agricultural activity continue on the site?

Solar farms are generally compatible with agricultural activities, allowing for dual land uses to provide landowners with an additional income source. This solar farm has been designed to allow for grazing activities to continue on the land during its operation.

Do solar installations pose a health risk?

No - solar is a passive technology which does not produce any harmful by-products. All electrical equipment used meets the relevant standards and will not cause any ill-health to site personnel or visitors to the site.

How will the solar farm and BESS appear?

The solar farm will be enclosed by a 2 metre high security mesh fence which will incorporate a number of small openings to allow for the movement of wildlife. Given that the solar installation is to be sited some distance away from Goyder Highway, and all elements are low scale, it will not cause any adverse visual impact.

How are the panels kept clean?

Rainfall generally helps to keep the panels free of dust and dirt. The panels will be thoroughly cleaned as a regular maintenance activity using specialised equipment and water brought to the site on trucks to ensure the solar farm operates efficiently.

Will the solar farm cause traffic disruption?

Once operational, the solar farm will require occasional maintenance by contractors who will access the site on a weekly/monthly basis. While the construction phase will see an increase in workers' vehicles accessing the site and heavy vehicles delivering materials to the site, any disruption to the local road network will be managed. A traffic management plan will be put in place during construction to direct all traffic to the approved access route along Goyder Highway and to the new site entrance.

What happens if there is a fire?

We will be undertaking consultation with the Country Fire Service (CFS) and will prepare a bushfire management plan for construction and operational activities associated with the solar farm. We will work closely with the CFS to ensure an appropriate response plan and worker training is in place to safely address any fire threat.



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