

Jindera Solar Farm Pty Ltd Grosvenor Place Level 18, 225 George Street Sydney NSW 2000

To the Resident

Proposed Solar Farm, Jindera

Firstly, thank you for taking the time to open and read this letter. I am contacting to you on behalf of our company, Jindera Solar Farm Pty Ltd, and would like to discuss our plans to seek Development Approval to build a solar farm on land along Glenellen Road, Kimberg Road and Walla Walla Road. We are writing to you as one of the nearest neighbours. We believe it is important to discuss the project with you and seek your views on what is proposed. More information on the project is contained in this letter. We have provided our contact details and would welcome you getting in touch with us, so we can arrange to meet you and discuss the project.

About Our Company

Our company is Jindera Solar Farm Pty Ltd (JSF), based in NSW. The company is a partnership involving Hanwha Energy Corporation and Green Switch Australia. Hanwha Energy are a major owner of solar farms in USA and Asia. Green Switch Australia is a developer who specialises in creating utility scale solar projects. Together we have many years' experience in developing, building and operating solar power projects.







Figure 1: Proposal Location



Jindera Solar Farm Project Site

The proposed project sites are shown in Figure 1 below above.

The project site is split into two distinct parts. The power generated from both sites will be transmitted to the TransGrid Substation on Ortilpp Road, located approximately 600 metres south of the eastern boundary of our development. Locating as we are, near to the main Jindera Electricity Substation provides an excellent opportunity to connect the site to the electricity transmission grid, so that the low carbon electricity created can be distributed to users.

The land we have selected and are now seeking consent to develop is well suited to solar energy generation. It is relatively flat, largely free of items that could cause shade over the solar panels and in an area with good solar resource.

Jindera Solar Farm Project Description

A solar farm uses an array of solar panels, also known as modules, to collect the energy of the sun and convert it into electrical energy. The technology is similar to that used on household solar systems, the modules are the same. A solar farm uses a larger number of modules and in the case of Jindera will use moveable modules that will track the suns progress across the sky each day. Tracking the sun means that more of its energy can be captured. We believe that the future of energy production in Australia should be based, where it can be, on non-fossil fuel energy sources such as wind and solar. We believe this is actually a cheaper way to produce the electricity we all need, and we believe that we all need to try to manage and reduce global warming. Jindera solar project can do that by replacing fossil fuel burning power sources.

The solar panels are typically arranged in banks of 80, controlled by the trackers so that they can follow the sun. Each bank will measure about 2.3 m from the ground to its highest point (Refer to Figure 2).

If our application is successful, the solar plant will have a long and productive life of around 25-30 years. However, we are mindful that the site must be designed, constructed and operated to ensure that the land can be returned to productive agricultural use once the solar farm is no longer needed.

Our formal application for consent will also include information on how we can manage the solar generating plant so that the land is always maintained in good order and we do not cause nuisance to our neighbours.

We also intend to deploy vegetation screening to ensure that our neighbours views are not diminished. We look forward to working with neighbours like yourself to ensure that this screening is effective but also more generally we would welcome your views on the project to help us to shape the design to ensure we have the least effect possible on you.







Figure 2: Typical height of a Solar Farm panel and general arrangement



Figure 3: Example solar farm





The Development Application Process

We have already had some limited discussions with the Greater Hume Shire Council. However, the Jindera Solar Farm is considered a project of State Significance. Therefore, the project will be investigated and determined by the NSW Department of Planning and Environment (DPE). State Significant Development must be assessed through a rigorous planning framework, resulting in an Environmental Impact Statement (EIS) being prepared. We are currently in the early, scoping stages of the development approval process, whereby a Preliminary Environmental Assessment is submitted to the Department for comment and the Secretary's Environmental Assessment Requirements (SEARs) issued to us for inclusion into the final application and EIS. The whole process is likely to take 9-12 months.

Greater Hume Shire Council will provide their views as a formal consultee to the consenting process. You can feed your own views and opinions into the formal process through consultation by submitting them to NSW DPE at the appropriate time.

Community Engagement and Consultation

We want to start our own consultation process by talking to you and our other closest neighbours. We would like to run this in parallel with the SEARs received from the NSW DPE. A Community Consultation Plan has been prepared for the project which identifies several ways in which we will engage with you:

Informal Engagement

This involves discussions with yourselves and your neighbours, through means like this letter, phone calls and meetings. These opportunities allow us to get a better understanding of your views on the project, and hopefully allows us to address any concerns early.

Community Information Sessions

Once we have developed our plans further but before we formally submit our application we will hold drop in sessions for the local and wider community to discuss the project and receive views and ideas on how the project should be designed and managed. – Sarah, you might be able to word this better?

Formal Submissions

Once the EIS is finalised, it is placed on Public Exhibition for at least 28 days. During this time, the community can make formal submissions to NSW DPE.





Contact Us

We will be in contact you again with updates as the project progresses. We would welcome your comments even at this early stage and we would be happy to meet to discuss the project. We appreciate your time is important to you, please get in touch and we will arrange to come to see you at a time that is convenient for you. Alternatively, please send us your thoughts and comments via the email address below.

Project Director for Green Switch Australia – Symon Grasby		
Mobile	0428 878 307	
Email	sg@greenswitchaustralia.com.au	

We look forward to meeting with you soon and the chance it will give us to explain our plans and receive your views and input. In the meantime, we thank you for reading this letter and please get in touch with us.

Yours sincerely,

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Symon Grasby Project Director Jindera Solar Farm Pty Ltd





Jindera Solar Farm Pty Ltd Grosvenor Place Level 18, 225 George Street Sydney NSW 2000

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The land proposed for the Jindera Solar Farm is well suited to solar energy generation. It is relatively flat, largely free of items that could cause shade over the solar panels and in an area with good solar resource.

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Figure 2: Typical height of a Solar Farm panel and general arrangement



Figure 3: Example solar farm





The Development Application Process

We have already had some limited discussions with the Greater Hume Shire Council. However, the Jindera Solar Farm is considered a project of State Significance. Therefore, the project will be investigated and determined by the NSW Department of Planning and Environment (DPE). State Significant Development must be assessed through a rigorous planning framework, resulting in an Environmental Impact Statement (EIS) being prepared. We have recently received the Secretary's Environmental Assessment Requirements (SEARs) for inclusion into the final development application and EIS and we are now undertaking environmental assessment and site design works. The output from this activity will be presented in an EIS which forms part of our development application. The whole application process is likely to take 9-12 months.

Greater Hume Shire Council will provide their views as a key stakeholder to the application process. You can feed your own views and opinions into the formal process by submitting them to NSW DPE at the appropriate time. Refer to the flow chart below for more details.

8 weeks Prepare EIS and specialist reports, and lodge with Development Application OCTOBER 2 weeks NSW DPE checks EIS and reports DECEMBER 2 weeks Update EIS and reports (if required) DECEMBER 4 weeks Public Exhibition Period (View on NSW DPE website) JANUARY 2 weeks DPE provides submissions / responses on website FEBRUARY

2-4 weeks Applicant response to submissions / responses

MARCH

8 weeks NSW DPE assesses Development Application and issues approcal or refusal APRIL

The assessment process for major projects includes a consultation period, known as a Public Exhibition which provides members of the community the opportunity to have their say. Responses can be submitted online through the Department's major projects development assessment tracking system, or written submissions can be sent to the Department by post or email. We anticipate that the exhibition period will be in January/February 2019, and you and your neighbours will be notified of any changes or when the expected consultation period will commence.

Community Engagement and Consultation

We started our own consultation process back in August by talking to our immediate neighbours. Now we are widening our consultation to include yourself and properties up to 2km from our





proposed site. A Community Consultation Plan has been prepared for the project which identifies several ways in which we will engage with you:

Informal Engagement

This involves discussions with yourselves and your neighbours, through means like this letter, phone calls and meetings. These opportunities allow us to get a better understanding of your views on the project, and hopefully allows us to address any concerns early.

Community Information Sessions

Once the development application has progressed, we will hold drop-in sessions for the local and wider community to discuss the project and receive views and ideas on how the project should be designed and managed before formal lodgement and exhibition to NSW DPE. Notice of the time and location of the drop-in sessions will be provided via flier to the wider community and through social media.

Formal Submissions

As set out in more detail above, once the EIS is finalised, it is placed on Public Exhibition for at least 30 days. During this time, the community can make formal submissions to NSW DPE through the Major Project Assessments website found at http://www.majorprojects.planning.nsw.gov.au/. Although, our preference is to meet and discuss any concerns with you before the exhibition period, so they can be incorporated into the final design or addressed in the early stages of development. The reference number for the proposed Jindera Solar Farm is SSD 18-9549

Contact Us

We will be in contact with you again with updates as the project progresses. We would welcome your comments even at this early stage and we would be happy to meet to discuss the project. We appreciate your time is important to you, please get in touch and we will arrange to come to see you at a time that is convenient for you. Alternatively, please send us your thoughts and comments via the email address below.

Project Director for Green Switch Australia – Symon Grasby		
Mobile	0428 878 307	
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We look forward to meeting with you soon and the chance it will give us to explain our plans and receive your views and input. In the meantime, we thank you for reading this letter and please get in touch with us.

Yours sincerely,

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Symon Grasby Project Director Jindera Solar Farm Pty Ltd





PROPOSED JINDERA SOLAR FARM

Property size:	519 hectares
Development size:	337 hectares
Capacity:	~ 120 MW
Lifespan:	~ 30 years
Height of panels:	up to 3.0 m high
Height of inverter:	up to 3.5 m high
Panel type:	Single axis tracking
Employment:	200 + direct jobs during
	construction, 2-3 full time
	staff during operation
Site access:	Via Walla Walla Jindera Road
	and Urana Road
Construction period:	~ 12 months



Planning Pathway

Visual repre

The proposal is State Significant Development. The development can be followed as it progresses through the application process, and/or a submission made from the NSW Planning Website at http://www.majorprojects.planning.nsw.gov.au/





Contact Us

For project information, contact details, or to leave feedback/questions, please visit: www.jinderasolarfarm.com.au

Green Sv

AUSTRALIA



FAQ about Solar Farms



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Solar panels convert radiation into heat. This effect is localised to the site with negligible impacts on adjacent properties.



Distance (metres)	Sound Level	Comparative Sound	
1m	49.90 dB	Conversation at home; quiet suburb; refrigerator	
3m	~40 dB	Library; babbling brook; computer	
30m	~20 dB	Whisper; rustling leaves	A
The motor for the trackers runs for 5-10 seconds every 1-2 minutes. Noise level decreases with distance.			

Grazing is an effective means of ground cover and weed control on solar farms.





100

75

50

Solar panels create minimal glare or reflectivity compared to other surfaces, including water and cropped grassland. Crops/Grassland Solar Panel Forest Fresh Snow Water

PROPOSED JINDERA SOLAR FARM

The proposed solar farm will occupy around 519 hectares of land currently used for agriculture

1. DC power is

transferred from

the solar array to

the Inverter

Why this property?

- It has excellent solar exposure.
- It has good access to a road network.
- It has ready access to the power grid.
- It is relatively flat.

3.0 m

- It has natural screening.
- The land is heavily disturbed by past and current agricultural activities.
- The land is not categorized as hazardous such as flood and bush fire.



The proposed solar farm would include tracking solar modules

Around 370,000 solar panels would be mounted on a tracking system. These panels, at their highest point, would stand about 3.0 m above ground level.

The solar farm would generate over 200 jobs during construction and approximately 2-3 full time jobs during operation.

The expected lifespan of the farm is 25 – 30 years. After this, infrastructure will either be removed or upgraded.

2. The inverter changes the DC power to AC. Power can be stored in the battery units to be transferred to the grid

It will generate approximately 240,000 MW/h of renewable energy – enough to power approximately 40,000 homes annually.

It will save around 80,000 tonnes of carbon dioxide per year when compared with brown coal, which is the equivalent of taking 35,000 cars off the road each year



at peak demand.





8 weeks

Prepare EIS and specialist reports, and lodge with Development Application

> **OCTOBER -**DECEMBER

2 weeks

NSW DPE checks EIS and reports JANUARY

2 weeks

Update EIS and reports (if required) FEBRUARY

To view the Development Application, track it's process or make a submission, visit the NSW Planning and Environment Major Project Assessments page on http://majorprojects.planning.nsw.gov.au/application/SSD

4 weeks

Public Exhibition Period (View on NSW DPE website)

FEBRUARY -MARCH

2 weeks

DPE provides submissions / responses on website

MARCH

Applicant response to submissions / responses **APRIL**

2-4 weeks

8 weeks

NSW DPE assesses Development Application and issues approval or refusal

APRIL - JUNE

Jindera Solar Farm Community Information Sessions



Join us at our community information sessions to find out more about the proposed *Jindera Solar Farm Project* (Urana Road, Walla Walla-Jindera Road, Klinberg Road and Glenellen Road). Our project staff will be available to provide information on the proposed project.

There are two upcoming sessions:

Wednesday 5 December 2018 - 10:00 am to 1:00 pm; and

Friday 7 December 2018 - 4:00 pm to 7:00 pm

The sessions will be held at the *Jindera Community Hub*, 83 Urana Street, Jindera. Sessions are informal so please arrive at your leisure

If you are unable to attend and would like more information on the proposal, on how to access the development application, how to make a submission or to contact us, please visit www.jinderasolarfarm.com.au





JINDERA SOLAR FARM FREQUENTLY ASKED QUESTIONS



DEVELOPMENT CONSIDERATIONS



Who is the Consent Authority?

For State Significant Development (SSD), applications are approved by the NSW Minister for Planning, or the Independent Planning Commission.

Applications are assessed in accordance with Part 4 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) and Schedule 2 of the *Environmental Planning and Assessment Regulation 200*). The

structure and content of the application addresses the SEARs provided by NSW DPE

What is State Significant Development?

Under the EP&A Act, a solar project is SSD if it:

- Has a capital investment value of more than \$30 million; or
- Has a capital investment value of more than \$10 million and is in an environmentally sensitive area.

What is the planning process for developing and approval of this proposal?

- 1. Scoping Report Secretary's Environmental Assessment Requirements (SEARs)
- 2. Environmental Impact Assessment (EIS)
- 3. Public exhibition
- 4. Response to Submissions
- 5. Assessment
- 6. Decision, or determination (approval/refusal)
- 7. Post-approval (compliance reporting)

The planning process can be followed on the NSW Department of Planning and Environment (DPE) Major Projects Portal:

https://www.planningportal.nsw.gov.au/majorprojects

What is an Environmental Impact Statement?

The EIS forms part of the application process and addresses the SEARs. The EIS examines the potential of all environmental impacts, then looks at the potential for effect to occur, the inherent impact this may have to the immediate and surrounding environment, and then proposes mitigation measures to reduce the residual risk to low or negligible levels.

The EIS, along with the associated specialist studies, can be viewed on the NSW DPE Major Projects Portal in the public exhibition period.

Is the land being purchased, or leased?

For the life of the proposal, the land will be leased from the relevant landowners.

Why was this land chosen?

Green Switch Australia (GSA) reviewed the solar generation potential of many areas in NSW. The proposed site was selected because it provides the optimal combination of:

- Low environmental constraints
- Level terrain for cost effective construction.
- High quality solar resource.
- Compatible land use zoning.
- Low flood risk.
- Existing road access.
- Onsite connection to transmission network.
- High levels of available capacity on the grid transmission system.
- Land availability and support from the landowner

JINDERA SOLAR FARM FREQUENTLY ASKED QUESTIONS



CONSTRUCTION AND OPERATION

What is the timeline for construction and operation?

Construction is likely to commence early to mid-2020 and take approximately 12 months to complete. A peak construction period of approximately 3 to 4 months is expected.

The operational phase of the proposal is 30 years. After this, solar infrastructure will either be upgraded or removed entirely with the land restored to its previous use.

What are the construction and operational hours?

Construction and daily operational activities would be undertaken during standard daytime hours (7.00 am to 6.00 pm Monday to Friday and 7.00 am to 1.00 pm on Saturdays).

How many staff are required?

During the peak construction period, approximately 200 construction personnel would be required. Skilled construction staff would be hired locally where possible.

During operations, 2 to 3 full time equivalent staff will be required for maintenance and general operation. Additional maintenance contracts, such as fencing, weed management, road grading and maintenance, panel cleaning etc. will also be required locally.

What additional traffic impacts are expected?

During the peak construction, up to an additional 100 light vehicles and 20 trucks will be entering and leaving the site per day. Construction traffic will be limited to Urana Road and Walla Walla Jindera Road. Additional emergency and operational maintenance access will be available from Klinberg and Ortlipp Roads. No construction traffic will be permitted down Klinberg and Ortlipp Road.

The largest design vehicle is a 26m B-double truck, although the majority of trucks are expected to be 19m.

What infrastructure can we expect?

The proposal would have a total installed capacity of up to 150 megawatts, and would include:

- Solar panels will be mounded on single axis trackers at about 3m high.
- A battery storage facility, inverter/transformer units, on-site substation, site office and parking.
- Security fencing and CCTV cameras.
- Internal access tracks.
- Electrical cables, conduits and transmission infrastructure.
- On-site vegetative screening.



Vermeer Australia (2017)

JINDERA SOLAR FARM FREQUENTLY ASKED QUESTIONS



BENEFITS AND COMPLIANCE

What are the broad benefits?

Broadly, the proposal would generate approximately 275,000 megawatt hours of electricity per year, which is enough to power approximately 65,000 homes.

The proposal would also save around 92,000 tonnes of carbon dioxide per year, which is the equivalent of removing approximately 40,000 cars off the road.

The proposal would also enhance electrical reliability and security, and put downward pressure on electricity prices.



What are the local benefits?

The proposal would generate direct and indirect employment during all phases of delivery, including about 200 employees during peak construction and 2 to 3 staff during operation.

The proposal would also provide significant participation opportunities for business and workers located in the area, as well as direct business volume benefits for local services, material supplies and contracting.

Are solar farms allowed to be constructed on agricultural land?

Large scale solar farms are permissible and can also be compatible with agricultural land use.

Important agricultural land is identified as a key constraint within the *NSW Large Scale Solar Energy Guidelines for State Development,* which has been carefully considered in the site selection process for this proposal.

In addition to this, it is the intention of GSA and the involved landowners to continue low-density grazing on the subject land for the duration of the proposal. Grazing has proved to be an effective method to reduce vegetation biomass and put pressure on weeds under and adjacent to the solar panels.

Is reclassification of land class/type required?

A solar farm is not classified as industrial under the State Environmental Planning Policy (Infrastructure) 2007 (ISEPP). Under the ISEPP, electricity generating works are permissible in any land prescribed as rural under the relevant LEP. As the proposal is located on land zoned as Primary Production (RU1), the development is permissible with consent.

Who is responsible for management and maintenance of the proposal?

The proposal area is managed and maintained by the operator of the solar farm and relevant landowner in compliance with the Conditions of Consent imposed by NSW DPE and any Statement of Commitment in the EIS and subsequent management plans.





ENVIRONMENTAL CONSIDERATIONS

Are there any health implications of solar farms?

Solar farms use the same technology as household rooftop installations. No health issues have been associated with solar panels.

What are the visual impacts?

Visual impacts are possible for a number of residences adjacent to the proposed solar farm. A mixture of native species planting and distance buffers will be used to minimise the potential for impact.

Solar panels are designed to reflect as little sunlight as possible, resulting in negligible glare or reflection – typical solar panels reflect as little as 2% of incoming sunlight. The panels are on a single axis tracker which ensures the angle between the panel and the sun is optimised. The maximum tilt of the panels reduces the potential for reflection onto neighbouring properties.



Will there be a local heat increase?

Studies indicate solar arrays are unlikely to cause changes to microclimate or ambient temperature outside the perimeter of the proposal. There will be minor impacts to air and soil temperatures within the solar array perimeter, however any temperature increase within the solar array will be marginal.

Will panels work in all climatic conditions?

The panels are designed to use direct or indirect sunlight to generate electricity. This means they will still perform even if sunlight is partially blocked by fog or cloud cover.

Will the proposal cause increased runoff and flooding?

A runoff study on the proposal pre and postconstruction has been conducted, the model which included the filling in of 9 dams.

It was determined that there was negligible increase in runoff from the site in both a one-in-ten year rainfall event and a one-in-100 year event, with no expected impact to adjacent property owners.

What are the biodiversity impacts?

A small amount of vegetation, paddock trees and habitat is required to be removed for the proposal.

A Biodiversity Development Assessment Report (BDAR) has been developed for the proposal, which balances the proposed infrastructure footprint with the retention of best available habitat on site. The BDAR takes into consideration the value and integrity of habitat and potential or known threatened species.

A suite of mitigation measures has been proposed to reduce any potential impact to habitat and displaced fauna.

How is fire risk managed?

The operator of the proposal manages the solar farm in accordance with the needs of similar parcels in the surrounding landscape.

An extensive Fire Management and Emergency Response Plan will be created in consultation with the local Rural Fire Service to ensure pest practice and protection. This will include any additional mitigation measures required to ensure the safety of surrounding properties.