



V A S T S O L A R

EXTERNAL ENGAGEMENT AND COMMUNITY CONSULTATION

Vast Solar Knowledge Sharing Events and Activities –
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1 Our Story

The Australian Renewable Energy Agency (ARENA) and its predecessor, the Australian Solar Institute, have provided grant funding and other valuable support to Vast Solar since 2012. This support has assisted Vast Solar to develop the world's first modular concentrated solar thermal power (CSP) technology that uses sodium as the heat transfer fluid.

This journey has involved the development of three substantive sites at which different elements of Vast Solar's unique CSP technology have been trialed, tested, refined, scaled and ultimately, delivered. This journey culminated in the delivery of the 1.1MWe Jemalong CSP Pilot Plant in June 2018, having first delivered power to the grid from the Pilot in January 2017. The Pilot Plant is a fully realised proof of concept of Vast Solar's CSP technology. It is an Australian world-first.

The journey to realise the CSP Pilot Plant would not have been possible without the support of ARENA which supplemented private sector investment.

Knowledge Sharing forms part of Vast Solar's agreements with ARENA. Vast Solar has undertaken to share information via events and activities as documented in the Knowledge Sharing Plan agreed with ARENA.

This narrative report presents an overview of and discussion about Vast Solar's external engagement and community consultation activities as the company undertook work to plan and seek approval to construct and commission a world-first modular CSP Pilot Plant in regional Australia. The discussion also touches on the parallel external engagement and community consultation that was undertaken to develop and submit a development application to the NSW Department of Environment and Planning to construct a utility scale 30MW Reference Plant.

2 Introduction

2.1 External Engagement and Community Consultation

This report provides an overview and discussion of Vast Solar's stakeholder engagement strategy and activities undertaken to develop and to maintain good relations in the community where we do business, with strategic stakeholders and with communities of interest.



Community consultation and engagement is integral to good business practice and responsible corporate citizenship. Environmental planning and approvals processes require respectful and transparent consultation and the provision of information in a timely, accessible manner. For new industries, such as wind power and CSP, these requirements can be especially pertinent. Authentic consultation and community liaison can assist to inform and to foster community understanding and potential support and acceptance for new projects and technologies and/or assist in assuaging possible concerns.

ARENA encourages grant recipients to develop and implement appropriate community engagement strategies. New community consultation guidelines have been forthcoming in the renewable energy sector since plans and first steps for the CSP Pilot Plant commenced (especially for wind projects). From its commencement, Vast Solar has been committed to open and respectful engagement with our neighbours at Jemalong and in the greater Forbes community and we have built strong and enduring relationships with our local community and the Forbes Shire Council.

As a small technology company developing and demonstrating novel technology involving complex industrial engineering and some materials that may be perceived to be hazardous, Vast Solar's strategic stakeholders and communities of interest are diverse. They include industry participants from the energy retail and distribution sectors, industrial supply chain partners and expert manufacturing and construction contractors, as well as academic and industry based researchers and innovators. Our strategic stakeholders also include State and Local government agencies and statutory authorities with responsibility for the heritage and the environment, water resources, and development planning and approvals processes as well as fire and emergency services.

Developing and maintaining positive and professional relationships with our stakeholders is integral to how we do business and to how we build and maintain the trust and respect of our neighbours and local community, our staff, academic and industry peers, our investors and strategic partners including the Australian Government, through ARENA.

Effective external engagement and communication – formal meetings, community consultation, media, person-to-person meetings – help to establish and reinforce a company's social mandate to operate in the community.



As a small technology company undertaking construction and novel engineering tasks, Vast Solar is committed to working smartly and safely. The process of building and enacting a rigorous regime of workplace health and safety procedures and protocols along with forward-looking corporate policies has helped to build and consolidate Vast Solar's practices of respectful and inclusive engagement with all of our stakeholders. This in turn has helped to reinforce the company's position in the community as a respected and trustworthy corporate citizen

3 Community Consultation

3.1 Strategic Community Liaison Plan

In early 2014 Vast Solar prepared a detailed a Community Liaison Plan (CLP). The aim of the CLP was to provide a framework for consultation, engagement and positive ongoing relationships with the local community. The plan identified and listed local and regional stakeholders in the Jemalong, Forbes and greater central west community. It aimed to also document and capture discussions, issues and opportunities arising from community consultation that had been undertaken as part of the development application process for the JSS Pilot Plant. ARENA encouraged the company to develop a detailed Community Liaison Plan and provided valuable input to it.

The Community Liaison Plan is a "draft" document insofar that it was written as a living document that could (and has been) revisited and updated in response to changing stakeholder issues or other opportunities. For example, the 2014 CLP was substantially revised and updated in 2016 to support the 30MW development application and was included in the documents submitted to the NSW Department of Planning for that project application that was submitted in late 2016 (and subsequently withdrawn in late 2018).

The CLP has been a valuable resource and has helped guide and inform Vast Solar's ongoing external engagement and community consultation activities. Consequent to the sodium fire that was experienced on site in mid 2015, the CLP was augmented by a stakeholder Crisis Communications Plan (CCP) that detailed strategic internal and external stakeholders and action plans. Both the CLP and CCP have contributed to robust, clear and transparent communications with local stakeholders. For example, it is well established practice for Vast Solar to provide prompt and timely briefings to neighbours by phone, email and/or by person to person visits with



neighbouring property owners and residents in anticipation of developments on site. During commissioning of the Pilot Plant considerable effort has been made to forewarn neighbours about any activities that may introduce new noises, movements or steam emissions. For example, clouds of steam when the steam generator was first commissioned and forewarning of the sound of the turbine when first commissioned and tested over a number of days.

The CLP has been an important resource for both the CSP Pilot Plant and the 30MW Jemalong Solar Station project. Both projects - the realised Pilot Plant and the 'proposed' 30 MW State Significant Development Project - are located in the same community and the sites are within a few kilometres of each other. Consultation and engagement with our neighbours and the broader community has often been about both projects which has provided opportunities to explain the technology, elaborate learning's gained at the plant and to discuss issues of potential concern that have been limited principally, to matters of amenity such as vegetation screening.

When the plan was made in 2017 to develop a PV Project on the Hallidays site that was originally proposed as the site for the 30MW CSP plant, our neighbours knew Vast Solar, the key personnel and the history and logic of the change of plans. Consequent community consultation was undertaken directly and there were no negative responses from local members of the public in response to the PV project. The PV project received approval in record time and this is, in part, testament to sustained and positive stakeholder and community engagement and consultation.

3.2 Community Engagement and Consultation – The JSS Pilot Plant

The CLP was informed by, and responds to, community consultation undertaken to support the development application for the JSS Pilot Plant that is also referred to in earlier documentation as Vast Solar's Phase 3 JSS Pilot. Stakeholders identified in the plan were invited to attend information events or otherwise involved in the community consultation process. Documentation of the plan enabled key issues to be identified and documented and a strategic plan of action to be put in place to respond to them.

The application for development consent for the JSS Pilot Plant was submitted to Forbes Council in May 2013. During the approval process for the Pilot Plant, Vast Solar undertook a range of community consultation activities to provide information and education about CSP technology, it's



purpose and potential role in the energy system, about its potential relevance for regional economic development and about the physical attributes of CSP systems (their appearance, and how they work). As the JSS Pilot Plant was to be constructed relatively close to a major road (Lachlan Valley Way), Vast Solar was keen to ensure stakeholders – and particularly neighbours – would have an appreciation of the likely impact of the JSS Pilot on visual amenity of the Jemalong area. This included providing briefings to Forbes Council commencing as early as February 2013, well before the application for Development Consent was submitted. Vast Solar then provided update briefings to Council periodically and hosted a visit from Councillors and senior Council officers to the JSS Pilot site during its construction.

Upon submitting the Development Application for the JSS Pilot to Forbes Council,

- Documents about the proposal were placed on public display between 14 June 2013 and 15 July 2013.
- An advertisement was placed in the Forbes Advocate (by Forbes Shire Council) during the public display period advising residents of the proposal and inviting interested parties to review and provide comment
- Nearby property owners were notified of the proposed development via mail at the commencement of the exhibition period

Forbes Shire Council received three submissions during the exhibition period. Feedback in these submissions included:

- Support for the project and the local benefit it will bring to the region
- A request to visit the facility
- Further information regarding the location of project infrastructure
- Further detail regarding the long term plans of the JSS Pilot, including future operation and possible expansion
- Queries regarding potential glint and glare from infrastructure
- Further information regarding proposed vegetation screening and site aesthetics
- Request to alter access points during construction, to minimise potential impacts on the road network and irrigation systems
- Clarification on construction and operational noise

No objections were made in relation to the Pilot Plant. Additional information was provided by Vast Solar to address the issues listed above and the question of glint and glare was addressed via a research report prepared by Vast Solar to support both the Pilot Plant and the 30MW development application process. A site inspection with Council officers also took place as part of this review process. During the planning approval stage, Vast Solar representatives spoke with nearby neighbours and provided further information about the project and these relationships have been maintained to the present both through the CLP and CCP.



Prior to determination, Vast Solar representatives attended a full Council meeting, which included a public forum, to speak about the project and provide the audience (public gallery) with an opportunity to ask any further questions. No questions or statements were received from the audience during this meeting.

Vast Solar has maintained contact with Forbes Council, nearby residents, and interested local and regional stakeholders. This has included providing project news via the Forbes Advocate, expanding and populating the website and holding community information sessions. The most recent of these events was held in late 2017. Over twenty neighbours in the Jemalong and Bedgerabong area, along with elected and executive representatives of Forbes Council, were invited to an “project update and next steps” morning tea and site tour held at the Pilot Plant. Presentations about the Pilot Plant progress and commissioning process and plans to possibly develop the Jemalong Hybrid Solar Farm were made and very positive group discussion and interaction enjoyed, including a question and answer session during which neighbours were encouraged to share their thoughts and any concerns. Feedback was positive and consequent support for the PV project has been well received.

3.3 Community Engagement and Consultation – The 30MW Reference Plant

3.3.1 Background – Past and Current Plans for the 30MW Reference Plant

Vast Solar commenced the planning development and approvals process for the 30 MW facility in early 2014 in parallel with the development of the Pilot Plant. This action anticipated rapid construction and commissioning of the Pilot Plant and was undertaken to leverage funding opportunities that might be gained by linking the projects.

Vast Solar has delivered the Pilot Plant with strong performance results but this has taken several years longer than expected. Results from the Pilot Plant confirm that the ideal location for a showcase 30MW Reference Plant is one that has considerably higher DNI than Jemalong. Accordingly, in 2018 it was decided to withdraw the Development Application for the 30MW facility located at Jemalong and to focus plans to develop the 30MW Reference Plant at a location with higher DNI.



3.3.2 Community Consultation and Liaison – the 30MW Reference Plant

Community engagement activities for the proposed 30MW Reference Plant at Jemalong have provided Vast Solar with valuable experience, insight and learning's as well as the opportunity to meet and interact with our neighbours and members of the Jemalong and Forbes community. Issues raised and addressed and lessons learned have been carried forward into project and community consultation plans for forthcoming projects and fed directly into community consultation for the successful 50MW PV project that was developed and approved for the Jemalong Hallidays site.

Vast Solar initiated the development process for the 30MW Reference Plant with the NSW Department of Planning in mid 2014. The Secretary's Environmental Assessment Requirements (SEARS) were issued in August 2014. The SEARs informed ongoing consultation with government departments and agencies and the preparation of required specialist investigations that included a Preliminary Hazard Analysis, Visual Impact Assessment and special study on Glare and Glint in addition to more regular specialist studies on biodiversity and heritage matters.

Building upon earlier consultation measures for the CSP Pilot Plant, the formal community engagement and consultation process for the JSS 30MW Project commenced in November 2014 with a community consultation forum held on 14 November 2014 at the Jemalong Regional Education Centre. An advertisement placed in the Forbes Advocate newspaper invited members of the public to attend and invitations were sent to Forbes and Parkes Shire Councils. Vast Solar team members presented to an audience of approximately 12 attendees who had an interest in the project. Many of these attendees were from the business community in Forbes and Parkes and were interested in exploring opportunities that might exist for their businesses as part of project delivery. One significant local business in Forbes, already a supplier to Vast Solar for the Pilot project, spoke of the significant contribution Vast Solar's activities had already made to its turnover.

The Consultation Forum ran for 2.5 hours, with over 2 hours being questions and answers and interaction between stakeholders present and the Vast Solar team. Formal feedback response sheets were also provided so that view of those present could be recorded and factored into project development.

The feedback from the Consultation Forum was very positive, with no negative views expressed. An interesting observation made by a community stakeholder at the Forum was that, despite the



politically conservative leanings of the region and of the stakeholders represented, that there was a common view that the development was positive for the region and presented significant opportunities for economic and employment benefits in Forbes and across the region.

Following the Forum, an information presentation was also made to the Forbes Probus Club on 24 January 2014. This session was attended by a large combined group of the Men's and Women's Probus groups. A similar session was held with the Dubbo Seniors Group at Dubbo Workers Club in November 2014. Overall the above events illustrated strong interest from stakeholders in western NSW in large-scale solar development.

The strong interest shown by these groups and the positive feedback received provided reassurance for Vast Solar that the Project is likely to receive good and broad support across the spectrum of ages and community interests, even among traditionally very conservative community bodies.

With stakeholder groups and contacts, engagement strategies and information resources identified/developed, Vast Solar continued to implement the CLP prior to its review and update in June 2016. This included an ongoing program of regular visits to neighbours to discuss the Pilot Plant and next steps for the company. It was during one such visit that a neighbour sought work with Vast Solar and was subsequently employed as a valued employee on site.

In August 2016 the CLP was submitted as part of the overall suite of documents and specialist investigations submitted to the NSW Department of Planning as part of the Development Application process and Environmental Impact Statement for the Jemalong Solar Station 30MW project. The CLP (June 2016) set out strategies to guide community liaison activities not only for the planning phase but also for each of the project cycle stages if approved – that is, the design, construction and operational phases of the project.

The CLP included a table of issues raised by government Departments and agencies (SEARS) as well and matters raised by community members. These issues were mapped against each stakeholder group, along with proposed responses and communication strategies together comprising a comprehensive engagement action plan.

All of the issues raised were addressed in the Environmental Impact Study (EIS) and in further detail in the specialist studies that were undertaken as part of the EIS process and attached to the EIS:



- Biodiversity Assessment, presented in two parts:
 - Biodiversity Assessment
 - Impacts on Bird Populations and Recommendations for Bird Hazard Risk Management
- Aboriginal Cultural Heritage Assessment
- Hydrology Report (including flooding)
- Glare and Glint Analysis Report
- Visual Impact Assessment
- Preliminary Hazard Analysis

The EIS and the above studies were made publicly available on the NSW Department of Planning State Significant Development website via the development application and public exhibition process for the proposed 30MW. A number of these studies were also used, with some amendments, for the Jemalong 50MW PV project as they related to the Halliday's site.

3.3.3 Stakeholder Feedback to the EIS

The Development Application and EIS for 30MW project were submitted to the NSW Department of Planning in mid August 2016. As a State Significant Development, the project EIS and specialist studies were placed on public exhibition for one month in both Sydney and Forbes. Vast Solar alerted neighbours and other local stakeholders to encourage them to view the project information and this action was in addition to those taken to meet statutory requirements to advertise to notify the public. The exhibition period concluded on October 21 2016.

Eight submissions were received from State government departments and/or agencies as well as a submission from the Forbes Council. Given recent and current events at the time including the 2015 sodium fire and the 1:100 year flood in the Lachlan Valley in mid 2016, the majority of concerns raised related either to risk and safety in design with regard to sodium, flooding and flooding spatial impacts, transport and workforce planning.

No submissions or letters from members of the public were received during the public consultation period.



4 Other Strategic Engagement

4.1 Issues Management

In mid 2015 Vast Solar experienced a sodium fire under one of its sodium storage tanks at the Pilot Plant. This fire produced clouds of smoke that could be seen from some distance. Fire and Emergency Services experts traveled from Sydney to Jemalong to work with Vast Solar and local fire service personnel to assist, coordinate, manage and extinguish the fire. The fire provided valuable learning opportunities for all parties as sodium fires require particular knowledge and expertise and need to be extinguished with soda ash and other means without the presence of water.

The above incident helped to inform the development of Vast Solar's Crisis Communications Policy and protocol (flowchart of actions) developed as part of our Workplace Health and Safety, risk and emergency management policies and procedures. These procedures drive engagement with local and strategic stakeholders to ensure timely, transparent and effective communications with internal and external stakeholders in the event of possible incidents or perceived risks on site.

4.2 Vast Solar in the Community

As a small technology development company Vast Solar has provided student internships to university students and local high school and university students where possible and provided modest annual support to local community groups and events, such as the Bedgerabong Show.

We value the opportunity to work with and to support local groups including the Forbes Rural Fire Brigade and Fire and Rescue NSW. In addition to doing business in the Forbes region and injecting more than \$5 million into the local economy, we have sought where possible to contribute to local and regional economic development initiatives for regional Australia. For example, Vast Solar has been pleased to provide support to the Forbes Shire Council to help realise their vision of refurbishing a facility to establish the Jemalong Regional Education Centre (JREC) to help establish Forbes as a regional central of medical services, research and excellence.



Vast Solar also provided strong support from 2012 to efforts made by the ACT and regional Council's of central western NSW to assist the central west to become a renewable energy business region. In recent years the Parkes region has realised this goal and Vast Solar has been proud to lead the way in the neighbouring Forbes Shire region, contributing our CSP Pilot Plant and the Jemalong 50 MW PV Project that we successfully developed and sold to Genex Power in 2018.

4.3 Vast Solar and the Research Community – Universities and ASTRI

Vast Solar has established and maintained relationships with significant stakeholders in the academic community and has enjoyed formal research arrangements with the Australian National University (ANU), the University of New South Wales (UNSW), the University of Adelaide and the CSIRO. The company has provided valuable industry support and funding to a number of Australian Research Council (ARC) Linkage Grant proposals submitted by our research colleagues at ANU and UNSW.

Vast Solar is an industry partner to the Australian Solar Thermal Research Initiative (ASTRI) and has contributed to numerous ASTRI research forum discussions and events as well as knowledge sharing with academic researchers at Australian universities who are ASTRI members. Since 2012 Vast Solar has hosted numerous undergraduate and post graduate students either as summer interns, in association with our collaborative research projects and more recently as part of the *Vast Solar ASTRI Knowledge Sharing Commissioning Initiative* that ran in 2016 from January to August.

4.4 Strategic Industry and Agency Stakeholders

CSP is a new industry in Australia and sodium use at scale in industrial applications is not widespread. Vast Solar is a large user of sodium in the Australian context and it is in our strategic interest to support strategic stakeholders in government, fire and emergency services and industry to learn with us and to develop skills and confidence in the use and management of sodium and of how to safely manage sodium fires.



We have therefore invested in a variety of external stakeholder activities to support ongoing peer learning and development. In 2016 we worked with University partners and key stakeholders in Emergency Services to plan, convene and deliver targeted industry knowledge sharing and professional development and training. In 2016 the Chief Officer of ACT Fire and Rescue with Dr Joe Coventry from ANU invited representatives from ACT and neighbouring Fire and Rescue Services, ARENA, several government agencies (NSW and ACT) and Council representatives to a *Fire Training and Demonstration Day* to learn about different types of sodium fires and methods of extinguishment.

The Fire Training and Demonstration Day was attended by more than 40 people, including experts from relevant government departments, emergency services, research, engineering and related professions. Technical presentations and demonstrations were held along with extensive Q&A sessions and the opportunity for informal peer exchange and learning. Feedback on and follow up from the day was very positive.

Ends.