

The Pilbara Solar Newsletter

ISSUE 01: JUNE 2019

Our Vision

- STEP 1 Build a robust renewable energy industry where Traditional Owners are key stakeholders
- STEP 2 Scale up - Transition to 100% renewable Pilbara
- STEP 3 Globally cost competitive energy for local consumers and industry, and export

Welcome to the first edition of the Pilbara Solar Newsletter we look forward to bringing you updates on developments and upcoming projects

Why the Pilbara? Why Now?

Pilbara Solar's business model marries two major goals for both industry and government in WA.

- 1) Cost competitive renewable energy,
- 2) Indigenous business and economic development.

There has never been a better time to develop renewable energy in the Pilbara.

This year the region has already experienced the kinds of extreme weather that is becoming more common in our changing climate. Following the devastating drought and high temperatures of summer which saw thousands of cattle die from exposure, the Pilbara was then ravaged by Cyclone Veronica. The full cost of Veronica has yet to be accounted for. Port Hedland and Dampier ports were closed for days. The West Australian newspaper wrote:

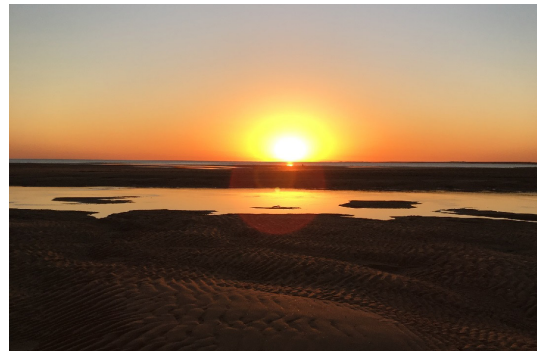
"Shipping data suggests Cyclone Veronica has cost the big miners more than 15Mt in lost exports or about \$2 billion in revenue, representing one of the biggest storm-related outages in the Pilbara iron ore industry's history".

In April 2019, BHP also announced that flood waters inland have reduced production by 6-8 million tonnes. It wasn't just the mining industry that was affected, it was a big hit for agriculture with damage to infrastructure and further livestock losses. A bittersweet turn of events, in that Veronica's rain was much needed.

In December, 2018 the West Australian Government announced it will develop a new climate change policy, acknowledging that the state is energy-intensive. The Pilbara is in a unique position to take advantage of this opportunity. The shift to renewable energy will create a future-focused industry, that brings prosperity, jobs and economic opportunities to all people of the Pilbara. (See EnergiseWA story).

Pilbara Solar's business model offers Traditional Owners the opportunity to take an ownership stake in the projects we develop.

We are 25% owned by the Yamatji Marlpa Aboriginal Corporation, and we want Traditional Owners to share ownership of a renewable energy industry that is operating on Traditional Lands. We intend to go way beyond land use agreements. We seek Traditional Owners as true partners, to share in ownership, to share the risks and the rewards. We only work with investors who will co-invest with Traditional Owners. It's about everyone getting a stake in the Pilbara renewable energy industry.



Self-determination and empowerment, employment, and economic development are all well-documented determinants of health. Supporting indigenous ownership in the renewable energy industry has the potential to lay the foundation for improved health and wellbeing in the long term. By investing in renewable energy that includes indigenous ownership, together we can directly address one of the major underlying causes of intergenerational social and economic social disadvantage in the Pilbara.



Pilbara Solar Welcomes State Government RED Grant

On Tuesday 9 April Pilbara Solar was delighted to welcome an announcement of project funding by the Minister for Regional Development Alannah MacTiernan. Pilbara Solar Director Simon Hawkins attended the \$50,000 Regional Economic Development grant announcement, accompanied by YMAC's Deputy Chairperson, Pilbara Regional Committee, Mrs Doris Eaton.

We gratefully accept this huge endorsement of our business model from the state government.

We thank the PDC, as well as our co-funding partners CPS National and Enernet Global, and also GHD for their in-kind support.

Please contact sam@pilbarasolar.com.au for more information



Photo: Mr Kevin Michel, MLA, Member for Pilbara, Simon Hawkins, Pilbara Solar Director and YMAC CEO, Mrs Doris Eaton, Deputy Chair, YMAC Pilbara Committee and the Minister for Regional Development; Agriculture and Food; Ports; Minister Assisting the Minister for State Development, jobs and Trade the Honourable Alannah MacTiernan MLC



Photo: EnergiseWA founder, James Lush

EnergiseWA

EnergiseWA is a popular movement building across Western Australia that will guide WA to zero carbon emissions by 2030. With enviable sun, wind and lithium resources, EnergiseWA recognises decarbonisation in response to the climate emergency as an immense opportunity for WA. EnergiseWA is developing a framework for WA to move quickly and capitalise on its renewable resource endowments and become a global economic leader in the zero-carbon economy.

EnergiseWA founder, James Lush has gathered a team of WA leaders who are preparing for a series of upcoming public forums across WA to build momentum. Lush said the EnergiseWA movement will be driven by people power.

The EnergiseWA team are currently undertaking "deep listening" to clearly understand public sentiment and will to act decisively on climate change. A Summit will be held later in 2019 to establish the action plan for zero emissions by 2030.

Lush said the Summit will be shifting the debate. "We all know what needs to happen. We need to decarbonise. This summit will be about how we do that. Zero emissions are inevitable. We need to get on with it."

Research update

Late in 2018, new research was published that supports Pilbara Solar's long term-vision to export renewable energy.

At COP24 in Poland, Australian researchers presented to the Global Energy Interconnection Development Organization (GEIDCO). The modelling of interconnection between the Java-Bali Grid and the NEM found that despite the high costs of High Voltage Direct Current interconnection, "the wholesale electricity cost of the integrated 100% renewable Australasia power system could be reduced by over 16%"

The Pilbara Solar team came together together to undertake research for the potential to export renewable energy using HVDC. This prefeasibility study was funded by the Pilbara Development Commission. This document was closely analysed by researchers from Deakin University who concluded that:

"The Pilbara-Java case study is important due to its electricity being solely generated by RE and its electricity exports to a country and region that has exponentially increasing energy demands. It has the potential to reduce Australia's reliance on coal exports, and to support a solar industry within a country experiencing political upheaval, as some political and corporate interests fight to prioritize fossil fuels and dismiss RE. Countries like China are leading the development of RE industries, creating new 'market power' [9]. Projects like the case study can assist Australia to 'stay in the game' in RE technology development, exports, innovation and employment".

Other aspects of the prefeasibility study were also ground-breaking. Pilbara Solar's Senior Project Officer, Kylie Chalmers' work on indigenous inclusion in large scale renewable energy projects was trailblazing in 2017. Kylie outlined indigenous ownership models and a clear pathway for renewable energy developers and indigenous groups to work together as true partners. Kylie has been a true thought leader and her influence is now being seen in new wave of research papers that are being published now.

An ARENA (Australian Renewable Energy Agency) report highlighted that China, Japan, Singapore and Korea are embracing the hydrogen economies. ARENA CEO, Ivor Frischknecht stated,

"Australia has a golden opportunity to become a major exporter of hydrogen, as other countries look to transition to low carbon energy sources... If Australia can tap into our abundant wind and solar resources to produce hydrogen using renewable energy, we could export hydrogen at large scale."

The Western Australian Government created the Renewable Hydrogen Council in August 2018 and hosted a renewable hydrogen conference.

With its outstanding solar resource, proximity to Asia and established trade relationships (gas, iron ore, lithium etc), the Pilbara could be a renewable export hub, possible both through HVDC and hydrogen.

This is achievable, but not without challenges. At the time of writing WA has the lowest implementation of renewable energy in Australia and no renewable energy target. Pilbara Solar is starting this renewable energy industry in the Pilbara and building from the ground up, with a goal to bring prosperity to all.

Wang, C. Dargaville, R. Jeppesen, M Power system decarbonization with Global Energy Interconnection – A case study on the economic viability, Global Energy Interconnection, Volume1, No. 4 (507-519) October, 2018.

Ralph, N. Hancock L. Energy Security, Transnational Politics and Renewable Energy Exports in Australia and South East Asia. Energy Research and Social Science, 49 (2019) 233-24

Investor update

Pilbara Solar always wants to hear from investors who are interested in our projects and are willing to share equity with Pilbara Traditional Owners of Country. To learn more about our business model and company vision, contact sam@pilbarasolar.com.au

In this newsletter we shine the spotlight on two members of our team:

Pilbara Solar
Director
Raylene Button



Raylene Button is a Kariyarra woman born in Port Hedland.

She is the Chairperson of the Kariyarra Aboriginal Corporation, her position as a highly respected spokesperson for the Kariyarra people is as a result of her education and abilities to comprehend the often complex negotiations and discussion which occur in the Native Title process. She is a committee member of Yamatji Marlpa Aboriginal Corporation's Pilbara Regional Committee. Raylene was also involved in establishing the Kariyarra Youth Education Program to teach leadership skills, culture/heritage knowledge, land management negotiation skills, and to encourage children to pursue their dreams.

Raylene is most proud in this role in the various Kariyarra Youth Leadership Programs, as well as obtaining her university degree and taking on the Community spokesperson role.

Pilbara Solar
Director
Geoff James



Dr Geoff James is a consultant in clean energy and is respected internationally as a thought leader.

Geoff spent 22 years with the CSIRO, and began to research distributed energy at the very time that "smart grid" came into the language, specialising in energy storage. Geoff spent 2014 with Reposit Power to help commercialise residential energy storage in the Australian market. In 2016 he joined the Institute for Sustainable Futures at UTS as a Research Principal, where he is project director of the \$5 million ARENA project, "Networks Renewed". He also works with Planet Ark Power to develop a commercial-scale, grid-integrated, micro-grid where he is responsible for the network connection and market participation processes.

In 2017 Geoff co-founded Pilbara Solar to develop solar projects in north-west Australia using new business models that provide equity to Traditional Owners. This is a pre-requisite for scaling up and engaging with ASEAN and global markets towards Australia's next major export opportunity.



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