

SOLAR GOLDFIELDS

“The Goldfields’ abundant sunshine has seen the region identified as one of the best in the world for large scale solar power.”



THE NEXT GOLDEN OPPORTUNITY

The past fifteen years have seen a massive increase in renewable energy deployment around the world, driven by climate change and rising fossil fuel costs. As installation of sun, wind and other clean technologies has grown exponentially, the costs of renewable energy has fallen rapidly.

At the same time, the passage of the Clean Energy Act in 2011 created a pool of funds to build the next generation of large scale renewable power stations in Australia. Since July 1, 2013, the Clean Energy Finance Corporation (CEFC) has \$2 billion per year to invest in renewable energy projects. We believe Western Australia can benefit if we move quickly and don't allow the old parties to cancel this important investment fund.

In particular, the CEFC will consider whether to invest in solar thermal, or Concentrating Solar Power (CSP) stations, which has huge potential for Western Australia and the Goldfields in particular.



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THE TECHNOLOGY

Developed in the 1970s in the United States, CSP technology uses mirrors or lenses to concentrate sunlight onto a single point or receiver, to make steam for powering an electrical generator. Typical CSP plants use standard steam turbines and often integrate heat storage to generate electricity many hours after the sun has gone down. This has been developed at a commercial scale in Spain, and much larger plants are now under construction in the United States and Middle East. There are currently 61 CSP plants in operation around the world, with another 22 under construction at commercial scale.

A report by the Australian Solar Institute (ASI) found concentrating solar power could provide about 30 per cent of Australia's total current electricity generation capacity with only modest extensions to the national electricity grid. The report also found that large scale solar thermal plants could be cost competitive with coal and gas well within a decade with concerted action.

Major advances in manufacturing have also occurred in solar photovoltaic (PV) technology, making possible large scale power stations of the type Investec is proposing at Mungari. PV power stations do not yet incorporate energy storage that would allow them to run without sunlight (batteries are not cost effective on a large scale) but nonetheless projects such as this would be a tremendous asset for the region.

ENERGY 2029

The need to reduce our dependence on polluting fossil fuels has been established for decades, but very little work has been done in Western Australia to determine how to achieve this task in reality.

The Greens "Energy 2029" study puts forward credible scenarios for meeting Western Australia's south-west grid electricity demand entirely through energy efficiency, fuel-switching, and a range of renewable energy technologies that exist today.

Rather than advancing a single way forward, we have proposed a number of scenarios to illustrate some of the options available to us. In this endeavor we are strongly indebted to the independent research and advocacy organisation 'Sustainable Energy Now' (SEN), whose engineering and programming expertise was invaluable.

The transition is urgent, but this study demonstrates that it is possible: the only barrier to a massive increase in clean energy here in Western Australia is political inertia.

"The fact that wind power is now cheaper than coal and gas in a country with some of the world's best fossil fuel resources shows that clean energy is a game changer which promises to turn the economics of power systems on its head"

MICHAEL LIEBREICH, CHIEF EXECUTIVE OFFICER OF BLOOMBERG NEW ENERGY FINANCE

What it means for the Goldfields

The Goldfields region has an abundance of sunlight, a growing demand for electricity and is connected to the South-West Interconnected System (the grid that distributes electricity across the south-west of WA). A number of studies have identified the region as one of the best in the world for large scale solar power.


In The Goldfields, the solar industry has strong community, business and Council support, but no major projects have come to fruition despite many years of hard work. We believe it is time to get behind this industry and promote the natural advantages of the Goldfields as the Clean Energy Finance Corporation considers where to invest its money.

Where to from here

Solar power stations require a large amount of labour to fabricate the mirrors or lenses (heliostats), and require access agreements for flat, cleared land on which to operate. These plants can be very large: hundreds of metres to kilometres across - and depending on the technology type they require access to local water to keep the mirrors clean and run the steam turbines.

We believe the industry should be transparent in seeking free, prior and informed consent for access to traditional lands and water sources, and should enter into land access agreements that provide for a stable rent for host communities. We will support the highest possible local labour content in manufacturing and maintenance of the plants. If these developments are done in the right way, we believe they can provide local jobs and abundant clean energy while reducing our dependence on polluting fossil fuels.

We intend to campaign to make sure we all see the benefits of the clean energy revolution. Please contact us directly with any questions or suggestions.



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