



Resources Stocks Down Under

🗨️ *On the infinite aisle, everything is possible.* 🗨️

- Chris Anderson (b. 1961), journalist & drone manufacturing entrepreneur

FRONTIER ENERGY

The sun also rises

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Stocks Down Under rating: ★★☆☆

ASX: FHE
Market cap: A\$45.9M

52-week range: A\$0.12 / A\$0.36
Share price: A\$0.20

Sometimes it seems that solar energy is like what Mark Twain said about the weather. Everyone talks about it, but no one seems to do anything about it. There is one ASX-listed company, however, with serious solar energy ambitions. Frontier Energy listed on the ASX in early March 2022 to develop its 114 MW Bristol Springs Solar Project in Western Australia.

Share price chart



Source: Tradingview

Solar at industrial scale

In a world where most civilised countries are committing to net zero carbon emissions by 2050, the future has got to look bright for solar power. And that's particularly true for Australia, which made its net zero commitment last October. Ours is a continent that gets a lot of sun. The key term here is 'direct normal irradiance', which is the amount of solar radiation received by a surface where that surface is always held up to the sun, no matter where it is in the sky. Down Under such surfaces typically get more than 6 kWh per sq m per day. In North America its only 4 kWh/sq m/d while in Europe it's only 3.

These days the Australian public is latching on to solar power in a serious way, with photovoltaic cells now generating around 10% of the nation's electricity. A lot of that is panels on the roofs of homes. Frontier Energy wants to do solar at an industrial scale and to that end it did a reverse takeover into the old Superior Lake Resources in March. A simultaneous capital raising procured Frontier \$8m at 13 cents a share.

A large foundation project

Frontier Energy's first step into solar is its Bristol Springs Solar Project near the town of Waroona, in the Peel Region of Western Australia, about 120 km south of Perth. Frontier has secured 200 hectares of land at Waroona to put up conventional solar panels generating 100 MW of power feeding into the South West Interconnected System (SWIS), which is the electricity grid for this part of WA. The connection point is the

SWIS's 'Landwehr' terminal, which is 3.5 km away (it's called Landwehr because the terminal is on Landwehr Road in the town of Wagerup).

The actual capacity of the Bristol Springs farm is 114 MW of direct current (MWdc). Why the need to specify direct current? Well, that's how solar panels generate electricity, but the grid runs on alternating current, so part of the equipment at Bristol Springs will be inverters to convert from DC to AC. Some energy is lost in that conversion, generally between 15% to 20%. So, Frontier's 114 MW solar farm, which the company believes it can have up and running by 2023, after a twelve-month construction effort, is 100 MW as far as the grid is concerned.

Frontier Energy's foundation project will be situated in the fast-growing part of Western Australia, population-wise, and there are some energy hungry industrial consumers in the neighbourhood, most notably the Pinjarra Alumina Refinery that Alcoa commissioned in 1972. The port town of Bunbury is nearby, the industrial centre of Kwinana isn't too far north and Collie, which most people will know is home to a 300MW coal-fired power station, also has an industrial precinct. So, there's plenty of end-users. And with the cost of panels these days Bristol Springs's costs will be competitive with conventionally generated electricity.

There are risks, however with this project. The solar farm hasn't been built yet. Nor does the farm have approval from Western Power to connect to the SWIS. And we probably don't have to remind you right now that inflation is playing havoc with the costs of just about everything needed to build Bristol Springs. The project does, however, have approval from the WA Regional Development Assessment Panel, smoothing the path to getting everything underway. And the application to plug into the grid is already in Western Power's in-box.

Renewable ambitions

The thing we really like about Frontier Energy is its growth plans. It's now scouting out the land opportunities that could raise its solar capacity up to 500 MW. It's looking into wind farms. It's evaluating battery storage solutions, which is where the real kick from renewable energy comes from so that sun doesn't have to be out or the wind doesn't have to be blowing all the time.

And the company is talking seriously about the potential for 'green hydrogen' at Bristol Springs. Green hydrogen means hydrogen sourced from water, where the water molecules are split into their hydrogen and oxygen components with a process called electrolysis. The hydrogen is captured and the oxygen is vented into the atmosphere as harmless water vapor. Hydrogen is green when the electrolyser is powered by renewable energy source, which is what Frontier Energy has been set up to build.

The whole opportunity is such a good one that Mike Young signed on as CEO around the time of the reverse takeover. He is the Canadian-born force of nature who brought Vimy Resources (ASX: VMY) to the point where its Mulga Rock Uranium Project had a good shot at being Australia's next greenfield uranium mine.

2022 is likely to be a good year for Frontier Energy. It will complete design work on Bristol Springs, complete project financing, sign on its various development partners and study design options for green hydrogen.

Frontier stock is more or less back where it was in March, but we see potential for it to be re-rated. There's now plenty of public funding out there for renewable energy and hydrogen in particular has taken on a credibility it didn't have two or three years ago. In that environment, we believe investors cognisant of the development risks associated with Bristol Springs can regard this opportunity as four stars.

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