

20 March 2023

## Frontier Energy (FHE)

DFS confirms Bristol Springs will be a low-capex, low-cost producer of green hydrogen (with production lifted ~10%)

**Frontier Energy has released a Definite Feasibility Study (DFS) for Stage 1 of its flagship Bristol Springs Renewable Energy project, in Waroona WA. Outcomes from the study are broadly favourable vs company's PFS (Aug 22) and confirm: (1) green hydrogen production of 4.9ktpa (PFS: 4.4ktpa), (2) A\$2.77/kg cost of production (PFS: A\$2.83/kg), and (3) initial capex of \$243m (PFS: \$236m). Following the release, we raise our revenue/EBITDA estimates for Year 1 by 12%/4% respectively, while our PT lifts to \$0.71/Sh (from \$0.70/Sh).**

**Production rises ~10%.** The highlight of today's release is an increase in forecast green hydrogen production, to 4.9ktpa (from 4.4ktpa previously). The higher production is driven by increased electrolyser load factors (84% vs 75% in the PFS); which is notably below the maximum 91% outlined in FHE's recent pre-FEED study.

**Capex ~unchanged.** In our discussions with investors, cost inflation is always cited as a key concern (for both solar and electrolyzers) – so it is encouraging to see initial capital costs of \$243m only marginally above the PFS @ \$236m. Solar generation = \$158m (-\$8m vs PFS), Hydrogen = \$85m (+\$15m).

**Low costs, BW est. = A\$3.06/kg.** The DFS confirms Bristol Springs will be an extremely low-cost producer of green hydrogen, with unit costs (inclusive of capital) of A\$2.77/kg, below the PFS @ A\$2.83/kg. We slightly moderate some of the study assumptions (ie. to be more conservative) and arrive at a total cost of \$3.06/kg – for context, this is still below any green hydrogen producer we've spoken with (listed or unlisted), and is well-below the WA Government's expectation for a median 2030 production price of \$4.71/kg.

**Long-term plan to increase production by ~16x.** Within today's release, FHE confirms its long-term plan to produce 1GW of renewable energy in the Waroona region. However, for the first time, the company puts a figure on its hydrogen production ambitions – being ~80ktpa of green hydrogen (or ~16x what we are currently expecting from Stage 1).

**Estimate changes.** Revenues in Year 1 of production rise to \$36.7m (from \$32.8m), while EBITDA is lifted to \$32.2m (from \$31m previously). All other changes between the DFS/PFS and our prior estimates are outlined within Pgs. 3-5 of this note.

**Next steps.** FHE remains on-track to be the first ASX-listed green hydrogen producer (and amongst the first nationally). With its DFS at-hand, next steps include: (1) securing off-take (BW est. 1H23), (2) project financing (Q2/Q3), and (3) FID (2H23).

| Recommendation                  | BUY        |
|---------------------------------|------------|
| Target Price (AUD)              | 0.71       |
| Share Price (AUD)               | 0.43       |
| Forecast Capital Return         | 64%        |
| Forecast Dividend Yield         | 0%         |
| <b>Total Shareholder Return</b> | <b>64%</b> |
| Market Cap                      | 125,765    |
| Net Cash (Debt)                 | 13,455     |
| Enterprise Value                | 112,310    |
| Diluted Shares on Issue         | 292,478    |
| Options/PRs on Issue            | 61,501     |

**Lindsay Bettiol | Head of Research**  
**Josh Allen | Research Analyst**

| Key Executives         |                |
|------------------------|----------------|
| Executive Chairman     | Grant Davey    |
| Managing Director      | Sam Lee Mohan  |
| Non-Executive Director | Chris Bath     |
| Non-Executive Director | Dixie Marshall |
| Non-Executive Director | Amanda Reid    |

| Catalysts           |            |
|---------------------|------------|
| Off-take agreements | Q2/Q3 CY23 |
| Funding secured     | Mid-CY23   |
| FID                 | 2H CY23    |

| Substantial Shareholders |       |
|--------------------------|-------|
| Alicia Jane Goyder       | 6.84% |
| Grant Davey              | 5.77% |

### Recent Performance



This report should be read in conjunction with the risks, disclaimer and disclosures sections which form part of this report and can be found at the end of this document.

## Summary Financials

| P&L (A\$m)                  | FY23E        | FY24E        | FY25E        | FY26E        | FY27E        |
|-----------------------------|--------------|--------------|--------------|--------------|--------------|
| Revenues                    | 0.0          | 0.0          | 18.4         | 37.2         | 38.1         |
| Operating Costs             | 0.0          | 0.0          | 1.9          | 4.7          | 4.9          |
| <b>Stage 1 EBITDA</b>       | <b>0.0</b>   | <b>0.0</b>   | <b>16.4</b>  | <b>32.5</b>  | <b>33.3</b>  |
| Corporate                   | 3.1          | 3.3          | 3.6          | 3.8          | 4.1          |
| Other                       | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| <b>Corporate EBITDA</b>     | <b>-3.1</b>  | <b>-3.3</b>  | <b>12.8</b>  | <b>28.7</b>  | <b>29.2</b>  |
| D&A                         | 0.0          | 0.0          | 12.1         | 23.0         | 20.7         |
| <b>EBIT</b>                 | <b>-3.1</b>  | <b>-3.3</b>  | <b>0.7</b>   | <b>5.7</b>   | <b>8.5</b>   |
| Net interest                | 0.0          | 3.1          | 8.8          | 9.4          | 9.2          |
| <b>Pretax profit</b>        | <b>-3.1</b>  | <b>-6.5</b>  | <b>-8.1</b>  | <b>-3.7</b>  | <b>-0.7</b>  |
| Tax                         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| FX                          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| <b>NPAT (rep)</b>           | <b>-3.1</b>  | <b>-6.5</b>  | <b>-8.1</b>  | <b>-3.7</b>  | <b>-0.7</b>  |
| Minorities                  | -0.8         | -0.9         | -1.0         | -1.0         | -1.1         |
| <b>NPAT (adj)</b>           | <b>-2.2</b>  | <b>-5.6</b>  | <b>-7.1</b>  | <b>-2.7</b>  | <b>0.3</b>   |
| <b>Ave shares (diluted)</b> | <b>312.5</b> | <b>372.5</b> | <b>372.5</b> | <b>372.5</b> | <b>372.5</b> |
| EPS adj (A¢)                | -1.2         | -1.9         | -2.3         | -1.1         | -0.3         |
| DPS (A¢)                    | na           | na           | na           | na           | na           |

| Balance sheet (A\$m)               | FY23E       | FY24E        | FY25E        | FY26E        | FY27E        |
|------------------------------------|-------------|--------------|--------------|--------------|--------------|
| Cash & equivalents                 | 42.6        | 10.1         | -0.5         | 15.1         | 31.3         |
| Receivables                        | 0.3         | 0.3          | 0.3          | 0.3          | 0.3          |
| Inventory                          | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          |
| Other                              | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          |
| <b>Total current assets</b>        | <b>42.9</b> | <b>10.5</b>  | <b>-0.2</b>  | <b>15.5</b>  | <b>31.6</b>  |
| Net PP&E                           | 18.4        | 180.1        | 248.8        | 225.8        | 205.0        |
| Other                              | 2.6         | 2.6          | 2.6          | 2.6          | 2.6          |
| <b>Total non-current assets</b>    | <b>21.1</b> | <b>182.7</b> | <b>251.4</b> | <b>228.4</b> | <b>207.7</b> |
| <b>Total assets</b>                | <b>64.0</b> | <b>193.2</b> | <b>251.3</b> | <b>243.9</b> | <b>239.3</b> |
| Payables                           | 1.1         | 1.1          | 1.1          | 1.1          | 1.1          |
| Short term debt                    | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          |
| Other                              | 0.1         | 0.1          | 0.1          | 0.1          | 0.1          |
| <b>Total current liabilities</b>   | <b>1.2</b>  | <b>1.2</b>   | <b>1.2</b>   | <b>1.2</b>   | <b>1.2</b>   |
| Long term debt                     | 0.0         | 113.2        | 168.0        | 164.3        | 160.5        |
| Other                              | 0.1         | 0.1          | 0.1          | 0.1          | 0.1          |
| <b>Total long term liabilities</b> | <b>0.1</b>  | <b>113.3</b> | <b>168.1</b> | <b>164.5</b> | <b>160.6</b> |
| <b>Total liabilities</b>           | <b>1.4</b>  | <b>114.5</b> | <b>169.4</b> | <b>165.7</b> | <b>161.9</b> |
| <b>Total common equity</b>         | <b>60.2</b> | <b>74.9</b>  | <b>76.7</b>  | <b>71.6</b>  | <b>69.5</b>  |

| Cash Flow (A\$m)                  | FY23E       | FY24E         | FY25E        | FY26E       | FY27E       |
|-----------------------------------|-------------|---------------|--------------|-------------|-------------|
| Cash Receipts                     | 0.0         | 0.0           | 18.4         | 37.2        | 38.1        |
| Payments to Suppliers             | -3.1        | -3.3          | -5.5         | -8.5        | -8.9        |
| Interest                          | 0.0         | -3.1          | -8.8         | -9.4        | -9.2        |
| Other                             | 0.0         | 0.0           | 0.0          | 0.0         | 0.0         |
| <b>Cash flow from operations</b>  | <b>-3.1</b> | <b>-6.5</b>   | <b>4.1</b>   | <b>19.3</b> | <b>20.0</b> |
| Capital expenditures              | -6.8        | -161.7        | -80.8        | 0.0         | 0.0         |
| Acquisitions                      | 0.0         | 0.0           | 0.0          | 0.0         | 0.0         |
| Divestitures                      | 0.0         | 0.0           | 0.0          | 0.0         | 0.0         |
| Other                             | 0.0         | 0.0           | 0.0          | 0.0         | 0.0         |
| <b>Cash flow from investment:</b> | <b>-6.8</b> | <b>-161.7</b> | <b>-80.8</b> | <b>0.0</b>  | <b>0.0</b>  |
| Dividends paid                    | 0.0         | 0.0           | 0.0          | 0.0         | 0.0         |
| Capital raised                    | 39.0        | 0.0           | 0.0          | 0.0         | 0.0         |
| Repaid debt/borrowed funds        | 0.0         | 113.2         | 54.8         | -3.6        | -3.8        |
| Grants                            | 0.0         | 22.6          | 11.3         | 0.0         | 0.0         |
| <b>Cash flow from financing</b>   | <b>39.0</b> | <b>135.7</b>  | <b>66.1</b>  | <b>-3.6</b> | <b>-3.8</b> |
| <b>Total cash flow</b>            | <b>29.1</b> | <b>-32.4</b>  | <b>-10.7</b> | <b>15.7</b> | <b>16.1</b> |

| Ratios & Valuations     | FY23E | FY24E | FY25E | FY26E | FY27E |
|-------------------------|-------|-------|-------|-------|-------|
| S1, EBITDA margin (%)   | na    | na    | 89%   | 87%   | 87%   |
| Corp. EBITDA margin (%) | na    | na    | 70%   | 77%   | 77%   |
| EBIT margin (%)         | na    | na    | 4%    | 15%   | 22%   |
| NPAT margin (%)         | na    | na    | -39%  | -7%   | 1%    |

| Incrementals            | FY23E | FY24E | FY25E | FY26E | FY27E |
|-------------------------|-------|-------|-------|-------|-------|
| EBITDA margin (%)       | na    | na    | 89%   | 86%   | 78%   |
| Corp. EBITDA margin (%) | na    | na    | 88%   | 84%   | 52%   |
| EBIT margin (%)         | na    | na    | 22%   | 26%   | 300%  |
| NPAT margin (%)         | na    | na    | -8%   | 23%   | 328%  |

|                    |       |       |       |       |       |
|--------------------|-------|-------|-------|-------|-------|
| P/E (x)            | -59.8 | -28.7 | -22.5 | -58.7 | 499.1 |
| P/B (x)            | 2.2   | 2.1   | 2.1   | 2.2   | 2.3   |
| EV/EBITDA (x)      | na    | na    | 12.5  | 5.1   | 4.4   |
| Revenue growth (%) | na    | na    | na    | 103%  | 3%    |
| EBITDA growth (%)  | na    | na    | na    | 124%  | 2%    |
| EPS growth (%)     | na    | na    | na    | na    | na    |

Dec year end

Ratios calculated using FHE share price \$ 0.43

Source: Company data, BW Equities Research estimates

## Estimate Changes

A summary of the key differences between DFS/PFS and our prior estimates for Stage 1 of the Bristol Springs Renewable Energy Project are outlined within Figure 1, with further discussion on key topics below.

**Figure 1: BSP Stage 1 assumptions**

| BSP Stage 1 Assumptions             | New     | Prior   | Δ    | Comments  |
|-------------------------------------|---------|---------|------|---|
| <b>Production, Solar</b>            |         |         |      |   |
| Solar Plant Capacity, MWdc          | 114     | 114     | 0%   | Unchanged   |
| Annual Production, GWh              | 245     | 250     | -2%  | Modest reduction to account for 98% availability (previously wasn't factored in)                        |
| <b>Production, Hydrogen</b>         |         |         |      |   |
| Electrolyser Capacity, MW           | 36.6    | 36.6    | 0%   | Unchanged   |
| Electrolyser Utilisation            | 84.0%   | 75.0%   | 9%   | Driven by an increased amount of energy acquired from the grid during off-peak periods (9pm - 6am)      |
| Energy to Produce 1kg Hydrogen, kWh | 55.0    | 55.0    | 0%   | Unchanged   |
| Hydrogen Production, tpa            | 4,897   | 4,372   | 12%  | Production rises by ~10% as a factor of increased electrolyser utilisation                              |
| <b>Annual Opex, Sales/Purchases</b> |         |         |      |   |
| Energy Price, Sales (\$)            | 30.0    | 38.0    | -21% | Lower energy sales prices assumed throughout the DFS vs PFS   |
| Energy Price, Purchases (\$)        | 68.0    | 64.0    | 6%   |   |
| Energy Price, Purchases             | 37.0    | 33.0    | 12%  | Higher energy purchase prices assumed throughout the DFS vs PFS   |
| Energy Service Charge               | 31.0    | 31.0    | 0%   | Unchanged   |
| LGC Price/MW (\$)                   | 40.0    | 35.0    | 14%  | DFS assumes \$45/MW. Spot consistently trading >\$40/MWh. We have assumed \$40/MW                       |
| Annual Capacity Credits, (A\$000s)  | 3,750   | 3,000   | 25%  | DFS assumes \$193k/credit. Current AEMO benchmark price = \$166k. We assume \$150k/credit               |
| <b>Annual Opex, General</b>         |         |         |      |   |
| Solar (\$000s)                      | 3,200   | 3,200   | 0%   | Unchanged   |
| Hydrogen (\$000s)                   | 3,500   | 3,500   | 0%   | Unchanged   |
| Annual Cost Escalation              | 2.5%    | 2.5%    | 0%   | Unchanged   |
| <b>Capex &amp; Construction</b>     |         |         |      |   |
| Solar (\$000s)                      | 157,900 | 166,300 | -5%  | A\$1,385/kW = in-line with IRENA 2020 industry average (US\$883/kW)                                     |
| Hydrogen (\$000s)                   | 84,600  | 69,900  | 21%  | A\$2,311/kW = above top-end of IRENA 2020 industry avg (US\$700-US\$1,400/kW), driven by cost inflation |
| Total, Stage 1 (\$000s)             | 242,500 | 236,200 | 3%   | Modest increase as Hydrogen cost inflation offsets lower Solar capex                                    |
| Time to Construct, Qtrs             | 6.0     | 6.0     | 0%   | Construction beginning 1Q24 and completing mid CY25   |
| <b>Funding</b>                      |         |         |      |   |
| Debt %                              | 70.0%   | 70.0%   | 0%   | Comparable projects have recently achieved ~80%. We assume a more-conservative 70% at this stage        |
| Grant %                             | 14.0%   | 14.8%   | -6%  | We assume grants = 40% of electrolyser capex (vs 50% prior). In-line with multiple domestic examples    |
| Equity %                            | 16.0%   | 15.2%   | 6%   | Balancing item = total project capex, less debt, less grants  |
| <b>Project Cost of Capital</b>      |         |         |      |   |
| Debt, after-tax                     | 3.9%    | 3.9%    | 0%   | 3.5% risk-free rate + 2% spread, 30% corporate tax rate   |
| Equity                              | 11.0%   | 11.0%   | 0%   | 3.5% risk-free rate, 1.50 beta, 5% equity risk premium  |
| WACC                                | 6.0%    | 6.0%    | 0%   | Excluded grant funding as we treat this as a separate cash inflow within the DCF                        |
| <b>Unit Economics</b>               |         |         |      |   |
| Cost of Production/kg               | 3.06    | 2.83    | 8%   | Positives: LGCs, capacity credits, volume... Negatives: Capex and energy prices                         |
| LCOH/kg                             | 4.89    | 4.48    | 9%   | Levelised Cost of Hydrogen production = NPV of capital and operating costs, net of grants per kg        |
| Sales Price Achieved/kg             | 7.50    | 7.50    | 0%   | Estimates vary widely. \$7.5/kg is competitive with other fuel sources (ie. diesel)                     |

### Production raised to 4.9ktpa...

The highlight of today's DFS was an increase in annual green hydrogen production, to 4.9ktpa (from 4.4ktpa previously). The higher production is driven by an increased electrolyser load factors (84% vs 75% in the PFS); which are notably still below the maximum 91% outlined in FHE's recent pre-FEED study.

### ...Expenses rise as a result

Higher production brings higher costs, with our estimate for Year 1 total expenses rising to \$4.6m, from just \$1.6m previously. Key differences include:

- An additional \$2.0m in annual power purchases (higher usage and prices)
- A \$1.4m reduction in power sales (less sold back to the grid + lower prices)
- A \$400k reduction in Large-Scale Generation Certificate (LGC) income, with lower retirements slightly offset by higher prices (BW \$40/MW vs \$35/MW).
- A \$750k benefit from Capacity Credits (higher prices).

A summary of the key changes vs our prior modelling are below.

**Figure 2: Operating expenses – DFS vs BW estimates**

|                                  | New          | Prior        | Δ           |
|----------------------------------|--------------|--------------|-------------|
| Operating Costs, Solar           | 3,200        | 3,200        | 0%          |
| Operating Costs, Hydrogen        | 3,500        | 3,500        | 0%          |
| Operating Costs, Sales/Purchases | -2,133       | -5,069       | -58%        |
| <i>Power Purchases</i>           | 9,317        | 7,390        | 26%         |
| <i>Power Sales</i>               | -3,381       | -4,750       | -29%        |
| <i>LGCs</i>                      | -4,319       | -4,709       | -8%         |
| <i>Capacity Credits</i>          | -3,750       | -3,000       | 25%         |
| <b>Total Operating Expenses</b>  | <b>4,567</b> | <b>1,631</b> | <b>180%</b> |

### We have been more-conservative with our cost assumptions

Our annual expenses of \$4.6m are quite a bit higher than the \$3.4m assumed within the DFS, due entirely to differences in our treatment of LGC and Capacity Credit pricing, as outlined below.

- **Large-Scale Generation Certificates (LGCs).** DFS assumes a \$45 credit for each MW of clean electricity generated – which is in-line with both current spot and futures pricing. We also acknowledge that many commentators believe LGC prices could be headed higher over time. Nevertheless, contracts have traded as low as ~\$40/MW recently, so we have opted to pull back modestly on this line item.
- **Capacity Credits.** DFS assumes \$193k per credit – which as per above, is in-line with current pricing. However, Capacity Credit pricing is volatile and changes annually. Additionally, given the PFS (from only ~6 months ago) had assumed a price of \$120k per credit, we thought it reasonable to moderate this assumption slightly, to \$150k per credit.

### Unit costs rise modestly, to \$3.06/kg (from \$2.83/kg)

The DFS confirms Bristol Springs will be an extremely low-cost producer of green hydrogen, with all-in unit costs (inclusive of capital) of A\$2.77/kg, below the PFS @ A\$2.83/kg.

And while we have been more-conservative with our cost assumptions, on a unit cost basis (ie. after adjusting for volume-based expense increases), the difference between our estimate of \$3.06/kg and the DFS @ \$2.77/kg is relatively minor – see Figure 3.

**Figure 3: Unit Costs – DFS vs BW estimates**

| A\$/kg                                 | DFS         | BW est.     | Diff.       |
|--|-------------|-------------|-------------|
| Direct Operating Costs                 | 3.31        | 3.31        | 0           |
| Direct Capital Costs                   | 2.08        | 2.08        | 0           |
| Gross Cost of Hydrogen Production      | 5.38        | 5.38        | 0           |
| <i>Power Sales</i>                     | 0.67        | 0.67        | 0           |
| <i>LGCs</i>                            | 0.96        | 0.88        | -0.08       |
| <i>Capacity Credits</i>                | 0.98        | 0.77        | -0.21       |
| By-Product Revenue                     | 2.61        | 2.32        | -0.29       |
| <b>Net Cost of Hydrogen Production</b> | <b>2.77</b> | <b>3.06</b> | <b>0.29</b> |

### EBITDA rises to \$32.2m from \$31.0m

Revenue increases from increased production (an additional 5ktpa @ \$7.5/kg = ~\$3.8m) more-than offset the abovementioned higher cost profile. As a result, our Year 1 EBITDA estimate rises to \$32.2m, from \$31.0m previously.

### Low capex requirement confirmed

In our discussions with investors, cost inflation has been cited as a key concern (on both the solar and electrolyser front) – so it was encouraging to see initial capital costs of \$243m come in on marginally above the PFS @ \$236m.

- **Solar.** Initial capital costs of \$158m are ~\$8m below the PFS estimate, with general cost inflation being offset by relocation of the point of connection to the Landwehr Terminal, which will save the company ~\$10m as highlighted within its recent optimisation study.
- **Hydrogen.** Capital costs of \$85m are higher than previously disclosed in either the PFS or pre-FEED studies. As demand for clean hydrogen grows rapidly, electrolyser supply has failed to keep up, with cost inflation having been well-publicised.
- **Sustaining capex** of \$11.7m over the life of the project was unchanged vs the DFS.

Our funding assumptions are broadly unchanged following today's release, with a debt/grant/equity split of 70%/14%/16% only modestly differing from our previous 70%/15%/15% modelling. This has been driven by a moderation in our electrolyser grant assumptions – where we previously assumed 50% of all capex would be funded via grants, we now assume 40%.

### Long-term production potential = ~80ktpa

FHE has confirmed its long-term plan to produce 1GW of renewable energy in the Waroona region. However, for the first time, the company puts a figure on its hydrogen production ambitions – being ~80ktpa of green hydrogen (or ~16x what we are currently expecting from Stage 1).

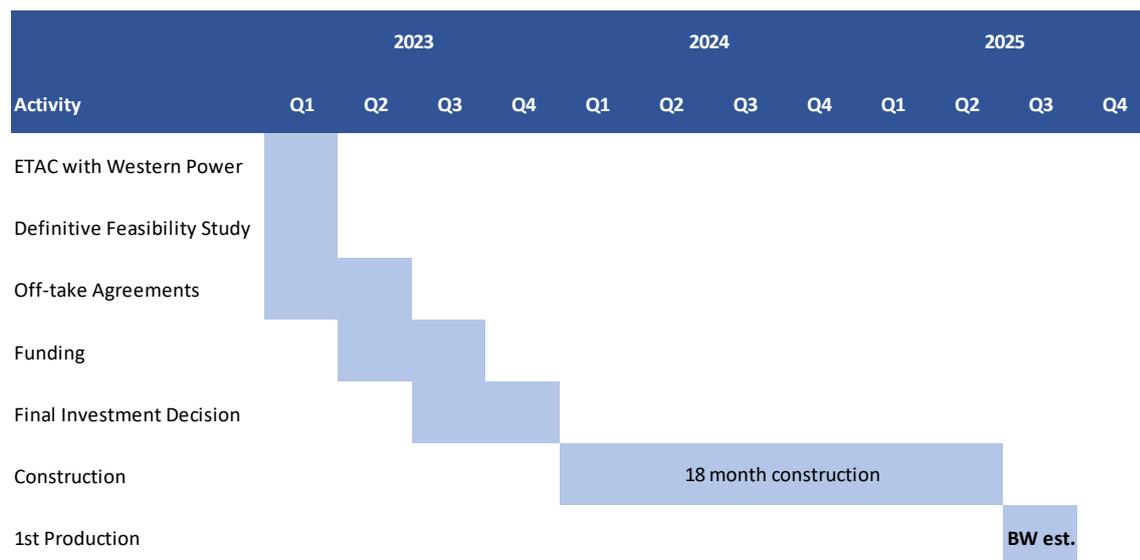
While we had previously assumed ~40ktpa as an upper production limit, our valuation assumes nothing beyond Stage 2 (and even then, only assumes a ~25% chance of progressing). As a result, our valuation is unimpacted by the above, although we see the ~2x increase in upside potential as welcome news.

## Upcoming catalysts

FHE remains on-track to be the first ASX-listed green hydrogen producer (and amongst the first nationally). With its DFS now at-hand, next steps include:

- Securing a foundation customer for the project (ie. off-take)
- Commencing project financing discussion (contingent on the above)
- Moving forward to FID (contingent on both of the above)

Figure 4: Bristol Springs Production Timeline, BW estimates



## Risks

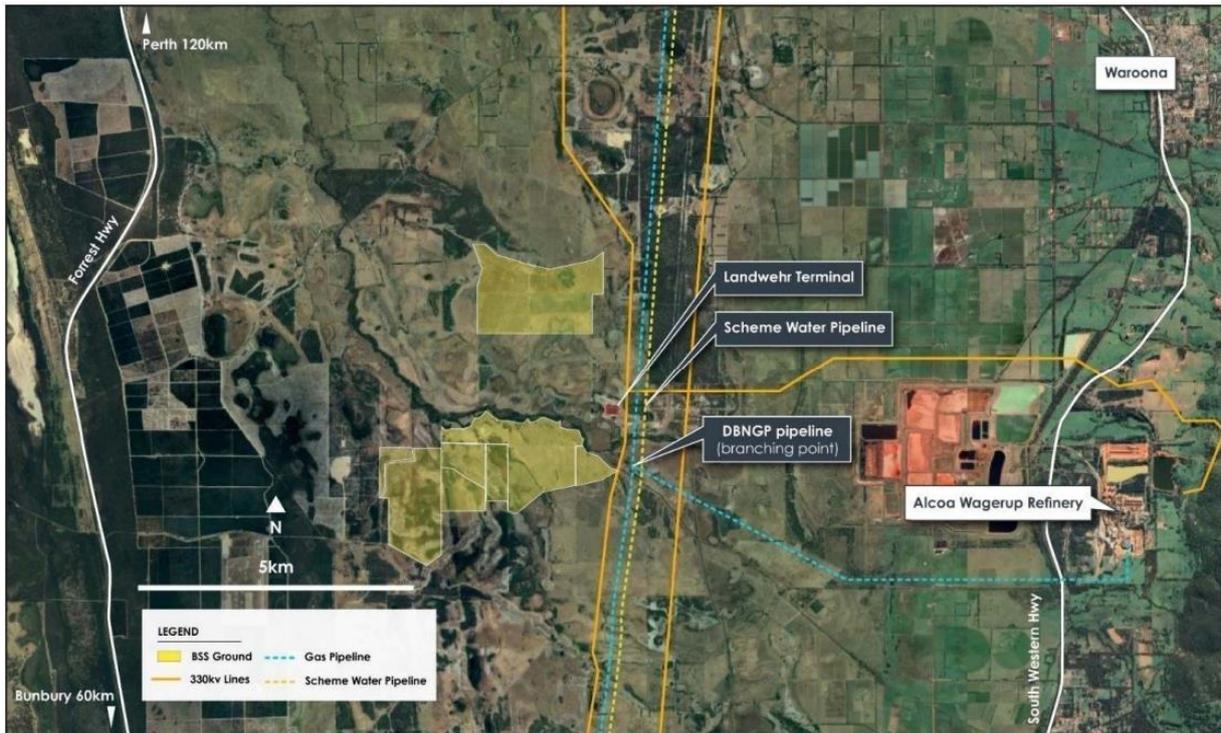
- **An embryonic industry.** The green hydrogen industry remains in its infancy, with production, transportation and sales all yet to be commercially implemented at scale. Our assumptions and commentary should be read with this in mind.
- **Contracts/off-take.** Finding demand for its product is a key risk for FHE. We believe there are many opportunities for off-take agreements, but being an embryonic industry, there are various unknowns involved.
- **Competition.** Green hydrogen is becoming increasingly popular, with new projects announced regularly. Increased competition could negatively impact profitability of the BSP.
- **Price achieved.** Profitability of the BSP is highly dependent on the price at which its hydrogen is sold. For example, a \$1/kg movement alters our PT by \$0.16/Sh.
- **Funding.** Given relatively low project IRRs, shareholder returns will be heavily impacted by the funding mix achieved at the BSP. We model a debt/grant/equity split of ~70%/14%/16%. Interest rates will also impact returns, given leverage assumed
- **Key people risk.** FHE is highly dependent on the knowledge and expertise of the management team and board. The loss of any of these individuals would likely have a negative impact of the business' operations.
- **Construction risks.** Many other factors can influence the success of the BSP during development including generation execution, timing delays, construction disruptions, cost increases, regulatory and legal risks and a loss of government support.

## Appendix A: The Bristol Springs Renewable Energy Project

Frontier Energy (FHE) is 100% owner and developer of the Bristol Springs Renewable Energy Project (BSP) – a multi-stage green hydrogen project located near Waroona, a town 120km south of Perth in Western Australia (Figure 5).

With the DFS now completed and off-take discussions at “advanced stages”, Frontier is aiming to be the first commercial-scale green hydrogen producer listed on the ASX.

Figure 5: The Bristol Springs Renewable Energy Project



### Stage 1

Stage 1 of the project will consist of a 114MWdc solar farm on 195ha of freehold land. Generation from this facility will be used to produce ~4.9ktpa of green hydrogen via electrolyzers totalling 36.6MW. First production is expected in late-2025 (we model 3Q25) and we expect Stage 1 will generate \$32m/year in Year 1 EBITDA on capital spending of ~\$250m.

### Stage 2

A recently completed Expansion Study indicates a further 324MWdc of electricity can be produced (ie. 438MWdc total) from a solar-only solution on adjoining land controlled by the company (Land Options secured) – we refer to this as ‘Stage 2’ of the BSP project. Simplistically, should the company wish to produce green hydrogen from this site, its electrolyser capacity could increase to ~140MW, underpinning production of ~19ktpa of hydrogen (BW est.).

## Appendix B: Executive Summary Table as per DFS

Figure 6: DFS Executive Summary table

| Stats  | Unit            | DFS            | PFS            | Change         |
|--|-----------------|----------------|----------------|----------------|
| Life of operation  | Years           | 25             | 25             | -              |
| <b>Solar</b>   |                 |                |                |                |
| Energy Production (post degradation and availability) (Yr 1) | GWh             | 245            | 245            | -              |
| Annual Degradation   | %               | 0.3            | 0.3            | -              |
| Availability   | %               | 98             | 98             | -              |
| Solar Capacity   | MWdc            | 114            | 114            | -              |
| Reserve Capacity Allocation                                  | MW              | 24.5           | 24.5           | -              |
| <b>Hydrogen</b>  |                 |                |                |                |
| Electrolyser – nameplate capacity                            | MW              | 36             | 36             | -              |
| Energy required to produce 1kg Hydrogen (End of Life)        | KWh             | 55             | 55             | -              |
| Water consumption  | L / hr          | 27,500         | 55,000         | 27,500         |
| Hydrogen production (pa)                                     | M kg            | 4.9            | 4.4            | 0.5            |
| Excess energy sold (pa)                                      | MWh             | 112,000        | 113,000        | (1,000)        |
| Average target load factor (max.)                            | %               | 91             | 91             | -              |
| Applied load factor  | %               | 84             | 75             | 9              |
| <b>Costs – Operating</b>                                     |                 |                |                |                |
| Operating costs – Solar                                      | A\$ m pa        | \$3.2          | \$3.2          | -              |
| Operating costs – Hydrogen                                   | A\$ m pa        | \$3.5          | \$3.5          | -              |
| Operating costs (Power sales/purchases) <sup>1</sup>         | A\$ m pa        | (\$3.3)        | (\$4.5)        | \$1.2          |
| Power Purchases<br>Average Price - \$68/MWh                  | A\$ m pa        | \$9.5          | \$7.7          | (\$1.8)        |
| Excess Power Sales<br>Average Price - \$30/MWh               | A\$ m pa        | (\$3.3)        | (\$4.5)        | (\$1.2)        |
| Large Generating Certificates (LGCs)<br>Average Price - \$45 | A\$ m pa        | (\$4.7)        | (\$4.7)        | -              |
| Capacity Credit<br>Average Price - \$193,000                 | A\$ m pa        | (\$4.8)        | (\$3.0)        | \$1.8          |
| <b>Total Operating Costs (Direct)<sup>2</sup></b>            | <b>A\$ m pa</b> | <b>\$3.4</b>   | <b>\$2.2</b>   | <b>\$1.2</b>   |
| <b>Capital</b>   |                 |                |                |                |
| Stage 1 – Solar  | A\$ m           | \$157.9        | \$166.3        | \$8.4          |
| Stage 1 – Hydrogen   | A\$ m           | \$84.6         | \$69.9         | (\$14.7)       |
| <b>Total Initial Capital</b>                                 | <b>A\$ m</b>    | <b>\$242.5</b> | <b>\$236.2</b> | <b>(\$6.3)</b> |
| Sustaining Costs <sup>3</sup>                                | A\$ m           | \$11.7         | \$11.7         | -              |
| <b>Total Capital Costs</b>                                   | <b>A\$ m</b>    | <b>\$254.2</b> | <b>\$248.5</b> | <b>(\$6.3)</b> |

**Table 1: Key Production and Costing Assumptions**

1 – Operating costs (power sales/purchases) = Power purchased from the grid (during off peak) – Excess power sales (on the grid) – Capacity Credits – Large Generation Certificates). All assumptions regarding each [sub cost] are outlined in the Study

2 – Excludes financing, depreciation and corporate costs

3 – Replacement Stack required after 90,000 hours. Replacement of solar panels are inclusive within Operating Costs - Solar

## Appendix C: Directors and Management

### Mr Grant Davey - Executive Chairman

Mr Davey is an entrepreneur with 30 years of senior management and operational experience in the development, construction and operation of precious metals, base metals, uranium and bulk commodities throughout the world. More recently, he has been involved in venture capital investments in several exploration and mining. He is also currently a director of Cradle Resources Limited (ASX:CXX) and Lotus Resources Limited (ASX:LOT) and is a member of the Australian Institute of Company Directors.

### Mr Chris Bath - Executive Director

Mr Bath is a Chartered Accountant and member of the Australian Institute of Company Directors, with over 20 years of senior management experience in the energy and resources sector both in Australia and south-east Asia. Mr Bath has been Chief Financial Officer for companies listed on AIM, ASX and JSX. More recently, he was a senior executive of a family office investment firm. Mr Bath is currently the Chief Financial Officer of Matador Mining Limited and non-executive director and company secretary of Cradle Resources Limited.

### Samuel Lee Mohan – Managing Director

Mr Lee Mohan is an accomplished energy executive with over 20 years' experience in the energy and utilities industry. Mr Lee Mohan's experience spans many facets of the industry, from design and construction through to strategic asset management, regulation, policy, commercial and innovation. His previous senior management positions include Global Head of Hydrogen of Xodus Group, where he developed and led the Company's overall hydrogen strategy. Mr Lee Mohan also spent six years at ATCO, where he was instrumental in developing the company's hydrogen strategy. Mr Lee Mohan earned his MSc in Mechanical Engineering from the University of Portsmouth and an MBA from the Australian Institute of Business.

### Ms Dixie Marshall - Non-Executive Director

Ms Marshall has more than 38 years of experience in media, advertising, politics and communications across a range of platforms, including television, radio, newspapers and digital. She has an advanced knowledge of data and digital innovation and is the first woman Managing Director of Marketforce, WA's oldest advertising agency. Ms Marshall worked from the Premier's Office for 6 years as the Director of Strategic Communications for the WA Government and has a unique insight and understanding of Australian Government policy and politics.

### Ms Amanda Reid – Non-Executive Director

Ms Reid has a significant background in government relations providing advice to a wide cross section of companies and organisations for more than 15 years for two national government relations and corporate communications firms. She was also a senior adviser in previous West Australian State Governments with responsibility for managing a strategic communications unit.

Ms Reid has held non-executive board positions across both private companies and not-for-profit organisations and is a member of the Australian Institute of Company Directors.

## Disclaimer

This research was prepared for wholesale investors only as defined by sections 708 and 761 of the Corporations Act. This report was prepared as a private communication to clients and was not intended for public circulation or publication or for the use of any third party, without the approval of BW Equities Pty Ltd (BW Equities). While this report is based on information from sources which BW Equities considers reliable, its accuracy and completeness cannot be guaranteed. Any opinions expressed reflect BW Equities judgment at this date and are subject to change. BW Equities has no obligation to provide revised assessments in the event of changed circumstances.

BW Equities, its directors and employees do not accept any liability for the results of any actions taken or not taken on the basis of information in this report, or for any negligent misstatements, errors or omissions. This report is made without consideration of any specific client's investment objectives, financial situation or needs. Those acting upon such information do so entirely at their own risk. This report does not constitute an offer or invitation to purchase any securities and should not be relied upon in connection with any contract or commitment whatsoever.

### DISCLOSURE OF INTEREST

BW Equities and/or its affiliated companies may make markets in the securities discussed. Further, BW Equities and/or its affiliated companies and/or their employees currently own shares and from time to time may hold shares, options, rights and/or warrants on any issue included in this report and may, as principal or agent, sell such securities. BW Equities acted as Joint Lead Manager and Bookrunner to the Company's October 2022 placement, acted as Lead Manager to the Company's January 2022 capital raising and has done business with the company covered in this report and has earned corporate advisory fees from the Company in the past.

The Directors of BW Equities advise that they and persons associated with them have an interest in the above securities and that they may earn brokerage, commissions, fees and other benefits and advantages, whether pecuniary or not and whether direct or indirect, in connection with the making of a recommendation or a dealing by a client in these securities, and which may reasonably be expected to be capable of having an influence in the making of any recommendation, and that some or all of our Authorised Representatives may be remunerated wholly or partly by way of commission.

### ANALYST DISCLOSURE

I, Lindsay Bettiol, certify that the views expressed in this report accurately reflect my personal views about the company and no part of my compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this report.

The analyst(s) responsible for preparing this research report received compensation based on several factors including BW's total revenues, a portion of which are generated by corporate advisory activities.

**BW Equities Pty Ltd ABN 66 146 642 462 AFS Licence No. 389353**

## BW Equities Contacts

Rory Luff  
Executive Director, Corporate  
+61 3 9601 4806  
[rluff@bwequities.com.au](mailto:rluff@bwequities.com.au)

Benjamin Kay  
Executive Director, Equities  
+61 3 9601 4801  
[bkay@bwequities.com.au](mailto:bkay@bwequities.com.au)

Lindsay Bettiol  
Head of Research  
+61 3 9601 4870  
[lbettiol@bwequities.com.au](mailto:lbettiol@bwequities.com.au)

Brendan Jesser  
Equities  
+61 3 9601 4805  
[bj@bwequities.com.au](mailto:bj@bwequities.com.au)

Paul Pekish  
Equities  
+61 3 9601 4809  
[ppekish@bwequities.com.au](mailto:ppekish@bwequities.com.au)

Tom Bleakley  
Equities  
+61 3 9601 4804  
[tbleakley@bwequities.com.au](mailto:tbleakley@bwequities.com.au)

Paul Bryan  
Equities  
+61 3 9601 4810  
[pbryan@bwequities.com.au](mailto:pbryan@bwequities.com.au)