

## Peak energy demand in WA puts supply under pressure; Management back strategy buying shares on market

Frontier Energy Limited (ASX: FHE; OTCQB: FRHYF) (Frontier or the Company) notes record energy demand during summer, driving prices higher during this period. The Company remains on course for a Final Investment Decision (FID) on its Stage One 120MW solar farm / 80MW 4-hour battery at its Waroona Renewable Energy Project (Project) in Western Australia by mid 2024.

### HIGHLIGHTS

- **Western Australia peak demand reached a new record of 4.23GW in February 2024, and has exceeded the 2023 peak six times this year**
  - As a result, diesel generated energy was required and ~235MW demand reduction measures were implemented by the Australian Energy Market Operator (AEMO)
- **Record February average wholesale electricity market (WEM) prices of \$76/MWh, compared to February 2023 (\$73/MWh) and \$63/MWh in 2022**
  - Increased volatility in electricity prices highlights the strategic importance of a battery to the Stage One strategy
- **The Australian Federal Government's \$67 billion Capacity Investment Scheme (CIS) presents a potential funding opportunity for Frontier that could enhance already strong Project returns**
  - The CIS remains on track for initial tenders during April / May 2024 and is planned by Government to be implemented through to 2027
- **On-market share purchases by directors and officers highlight confidence in the Company's strategy**
  - Board and management acquired over 1.3 million shares in 2024 and now hold 12% of Frontier

**CEO Adam Kiley commented:** "There is an urgent requirement for new major energy supply in Western Australia, as electricity demand continues to grow at a rapid rate. This has again been highlighted by the State's electricity network recording the six highest ever demand periods in the first two months of 2024, and prompting AEMO to call for supplementary diesel generation and demand side management.

AEMO has identified growth in business electrification, along with growth in cooling load (air-conditioning), electric vehicles, and the expansion of industrial loads as likely to underpin strong electricity demand growth over the next decade.

In addition, it has been reported the Water Corporation's \$2.8bn Alkimos desalination plant will not be able to achieve its target of 100% renewable energy, due to limited new major renewable energy projects coming online<sup>1</sup>. With other major industrial projects planned in the region, all with similar renewable energy aspirations and requirements, we believe the

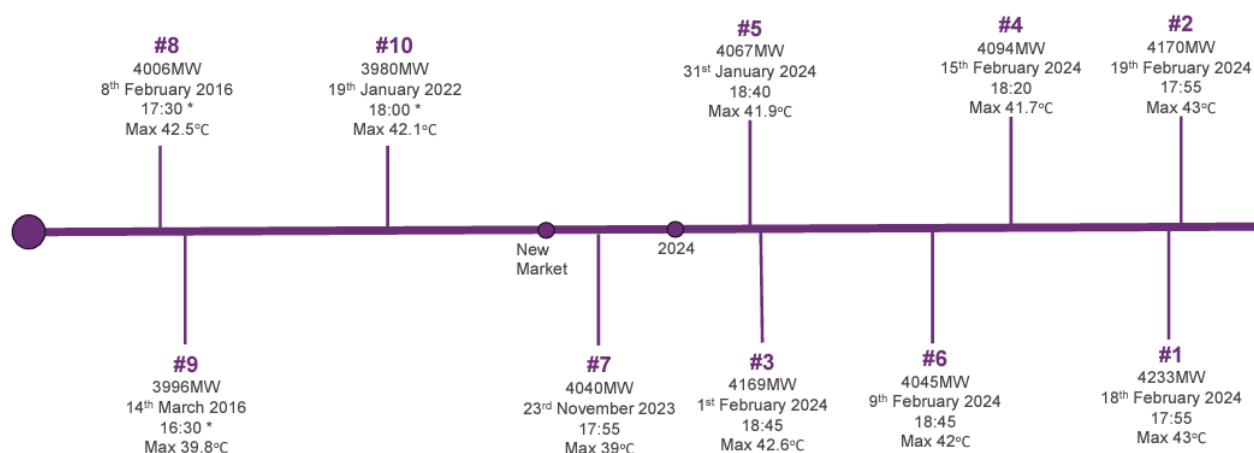
<sup>1</sup> <https://thewest.com.au/business/water/cold-water-poured-on-promise-for-new-28bn-alkimos-desalination-plant-to-be-powered-by-renewables--c-13812641>

strategic value of our Waroona Renewable Energy Project is becoming clearer to the market.

Stage One of our Project remains on track for a Final Investment Decision by mid-2024, as both the debt financing and strategic processes continue to move forward. However, with a clear and urgent requirement for more renewable energy on the grid immediately, once Stage One is finalised, we will look to action future expansion as quickly as possible."

## Strong demand places WEM under pressure in early 2024

Recently, extensive evidence of the increasing demand for electricity in WA in its real-time was confirmed at the market insights forum<sup>2</sup> in February 2024. During the first two months of 2024, previous record operational electricity demand was exceeded six times, each of which occurred during the late afternoon. The Company's solar farm plus battery strategy will enable it to supply electricity during periods of peak demand and higher prices. Figure 1 below highlights highest ten peak periods in the history of the WEM.



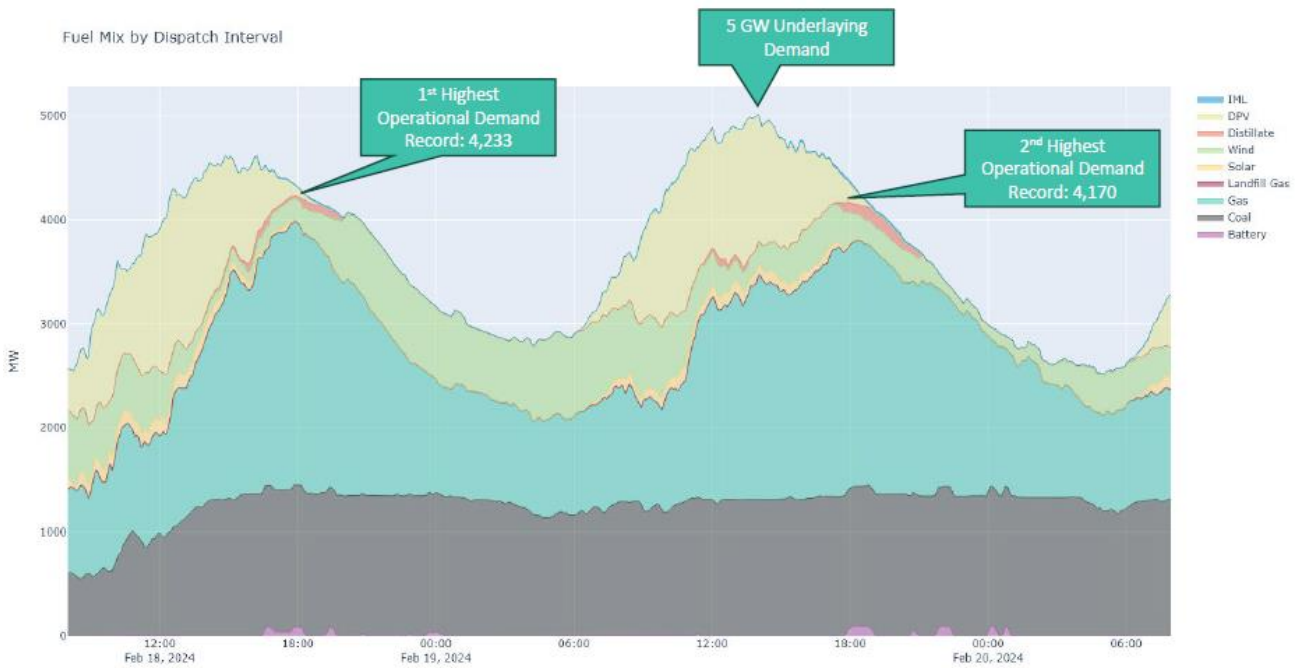
\* Pre-New Market Start the Energy market was operated on a 30minute basis

**Figure 1: Recent record demand days on the WEM**

The record demand over 18 and 19 February 2024, shown in more detail in Figure 2, was driven by sustained high temperatures during the day and into the evening. As a result, AEMO issued a forecast LOR<sup>3</sup> declaration on 18 February, implying that manual load shedding may be required on 19 February due to high demand and low wind. While this did not eventuate, additional diesel generated supply was required, as well as ~235MW of demand reduction measures.

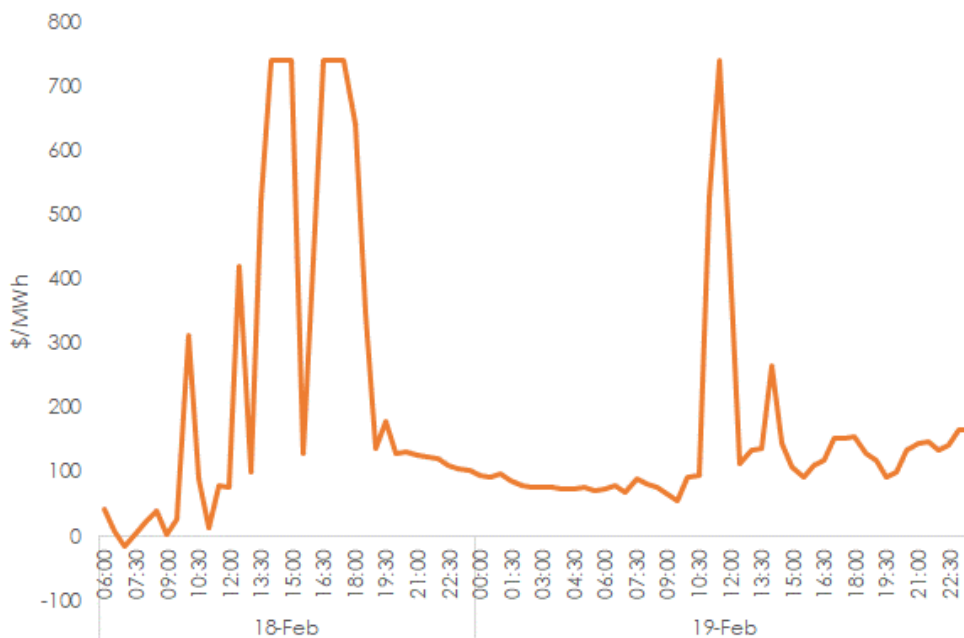
<sup>2</sup> [https://aemo.com.au/-/media/files/stakeholder\\_consultation/working\\_groups/wa\\_meetings/real-time-market-insights-forum/real-time-market-insights-forum-20-february-2024.pdf?la=en](https://aemo.com.au/-/media/files/stakeholder_consultation/working_groups/wa_meetings/real-time-market-insights-forum/real-time-market-insights-forum-20-february-2024.pdf?la=en)

<sup>3</sup> The highest possible lack of reserve notice that can be issued by AEMO



**Figure 2: Two record demand days on the WEM – 18 and 19 February 2024**

As a result, prices reached their cap limit of \$738/MWh in six half-hour intervals on 18 February, and for another interval on 19 February, as shown in Figure 3.



**Figure 3: Half hourly price during 18 and 19 February 2024<sup>4</sup>**

<sup>4</sup> <https://data.wa.aemo.com.au/public/market-data/wemde/referenceTradingPrice/previous/>

Key drivers impacting future supply and demand include:

- 32% of supply during the demand peak was from coal. The majority of coal generation capacity is owned by the WA Government which has advised that closure of coal generation capacity will commence in 2025 and be completed by 2029.
- After the demand peak on 18 February, the electricity price remained above \$70/MWh in most half-hour intervals as shown in Figure 3. Once more big batteries, of which 1.2GW are under construction, buy off-peak energy to supply energy during peak periods (as required under their Reserve Capacity obligations), off-peak demand will likely increase and support off-peak energy prices.

The only other coal power station in WA, Bluewaters, has recently been forecast to potentially close<sup>5</sup> by 2025/26 (previous AEMO Electricity Statement of Opportunities Expected Case had Bluewaters closing in 2030/31). Should Bluewaters close in 2025/26, a further 434MW of capacity will be removed from the supply side before 2027, which is expected to place upward pressure on electricity prices.

While there is significant battery capacity planned to be added in the next five years, new renewable generating capacity is limited, as shown in Table 1.

**Table 1: New Renewable Energy Projects<sup>6</sup>**

Project	Start	Size	Owner
<b>Wind</b>			
Flat Rocks Wind Farm Stage 1	FY2024	76MW	Enel
Flat Rocks Wind Farm Stage 2	FY2026	~100MW	WaterCorp
King Rocks Wind Farm	FY2026	~150MW	Synergy
<b>Total wind</b>		<b>256MW</b>	
<b>Battery</b>			
Neoen Battery Stage 1	FY2025	200MW / 800MWh	Neoen
Collie Big Battery	FY2026	500MW / 2000MWh	Synergy
Kwinana Big Battery Stage 2	FY2025	200MW / 800MWh	Synergy
Neoen Muchea BESS	N/A	200MW / 400MWh	Neoen
Alinta Wagerup BESS2	FY2025	100MW / 200MWh	Alinta
<b>Total Battery</b>		<b>1,200MW / 4,800MWh</b>	
<b>Mixed technology</b>			
Cunderdin Solar Farm and BESS	FY2024	100MW - 55MW / 220MWh	GPG
<b>Waroona - Stage 1</b>	<b>FY2026</b>	<b>120MW - 80MW / 320MWh</b>	<b>Frontier</b>
<b>Mixed Total</b>		<b>220MW – 135 / 540MWh</b>	
<b>Total New Energy projects by 2027</b>		<b>476MW (wind, solar) + 1,335 / 5,340 MWh (battery)</b>	
<b>Planned coal power station closures</b>	<b>2029</b>	<b>- 1,200MW</b>	

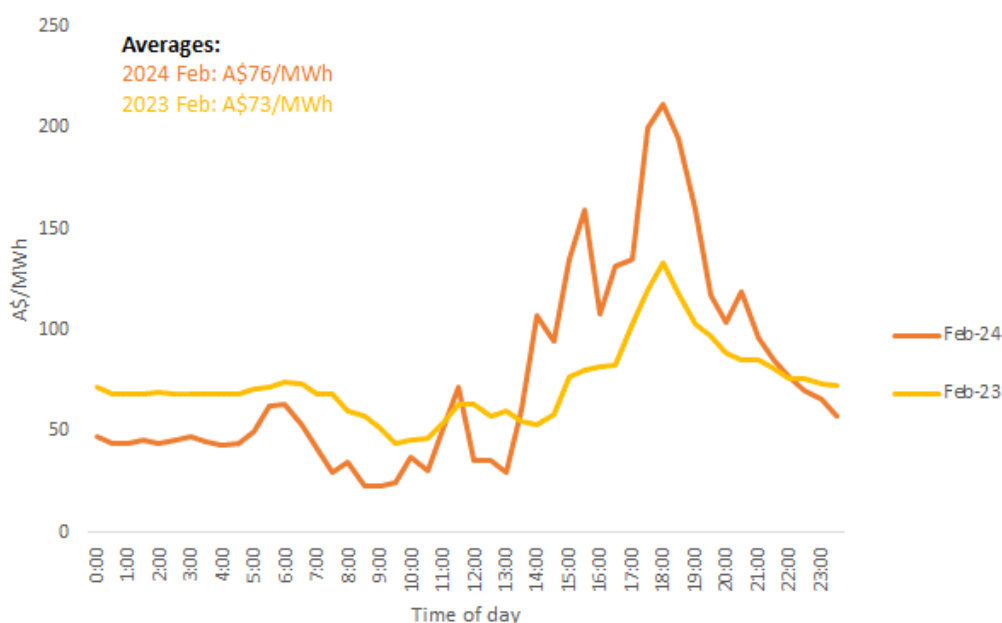
<sup>5</sup> [https://players.brightcove.net/6193427228001/default\\_default/index.html?videoId=6348793592112](https://players.brightcove.net/6193427228001/default_default/index.html?videoId=6348793592112) at 1:23:00

<sup>6</sup> [https://aemo.com.au/-/media/files/electricity/wem/planning\\_and\\_forecasting/esoo/2023/](https://aemo.com.au/-/media/files/electricity/wem/planning_and_forecasting/esoo/2023/)

## Wholesale electricity prices increased

WEM prices in February again increased year-on-year, following the 16% year-on-year increase in January<sup>7</sup>. The average price for February of \$76/MWh was a 4% year-on-year increase over \$73/MWh in February 2023<sup>8</sup>, following a 16% increase on \$63/MWh in February 2022.

The range from peak to trough in February 2024 was far more pronounced than in 2023, as shown in Figure 4.

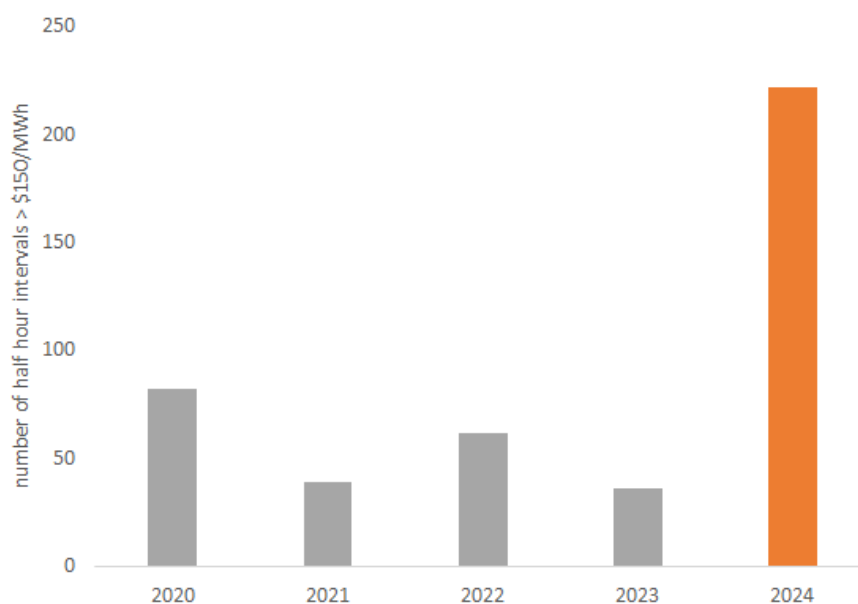


**Figure 4: WEM half hourly prices, averaged over the month**

The increased volatility has resulted in an increased number of half hourly intervals with extreme price points. In January and February 2024, the number of half-hour intervals with a price of \$150/MWh more than doubled compared to the same period in previous years. See Figure 5.

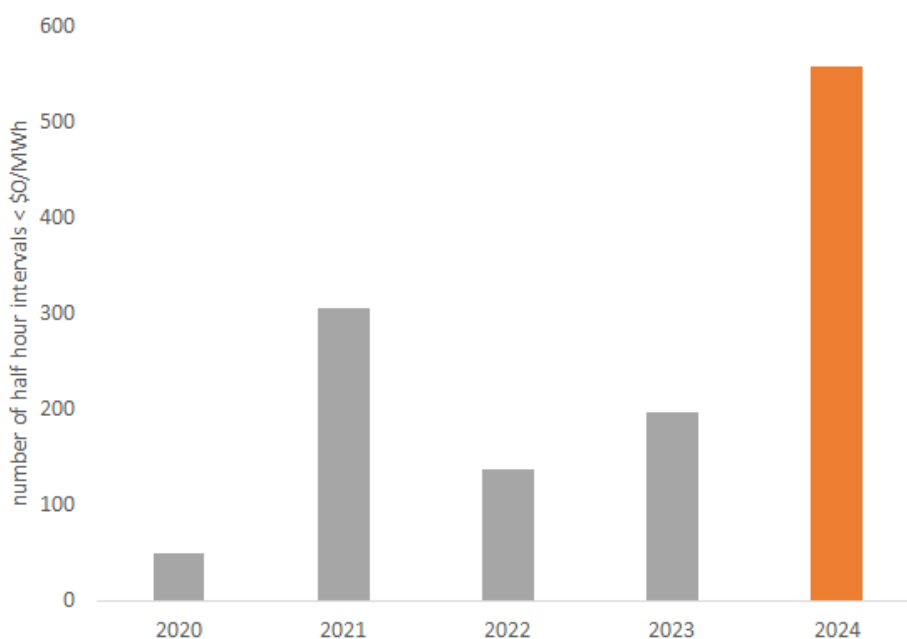
<sup>7</sup> See ASX announcement 8 February

<sup>8</sup> Source: AEMO; straight averages, no price cut-offs applied



**Figure 5: Number of intervals in January and February with price > \$150/MWh<sup>9</sup>**

At > \$150/MWh, an 80MW battery would generate revenue of > \$6k in a half hour interval. Similarly, the number of intervals with a price < \$0/MWh has increased significantly, as shown in Figure 6.

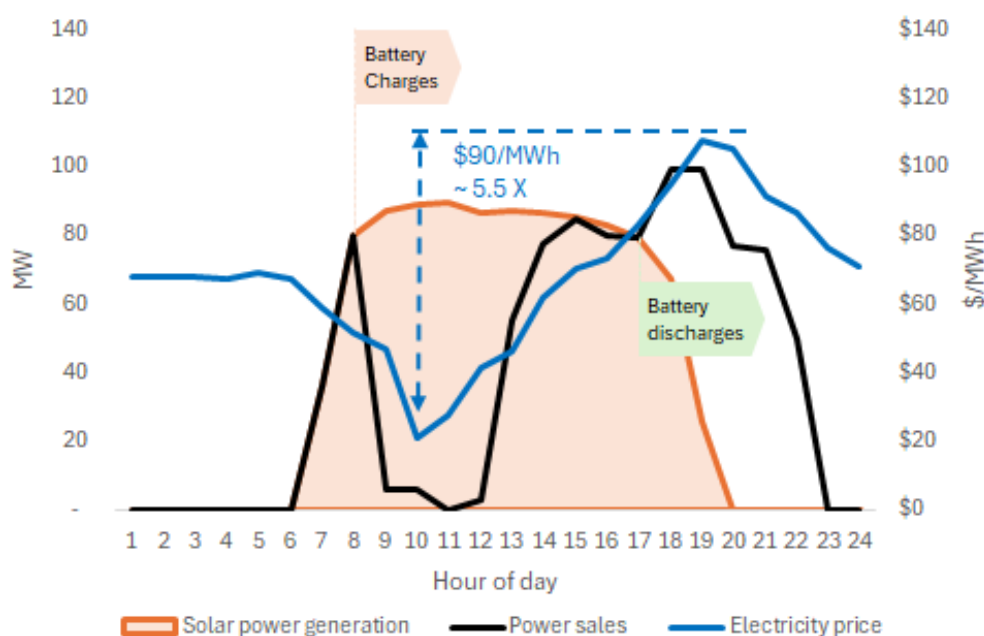


**Figure 6: Number of intervals per month with price < \$0/MWh**

During these intervals, which occur while solar generated supply on the South West Interconnected System (**SWIS**) is high, Frontier intends to charge the battery with renewable solar energy generated from its Stage One solar farm.

<sup>9</sup> AEMO pre-October 2023; <https://data.wa.aemo.com.au/public/market-data/wemde/referenceTradingPrice/> from Oct 2023

The pattern of electricity pricing validates the Company's planned strategy of building an integrated solar farm and battery, which is designed to benefit from high peak prices, by storing the renewable electricity generated by the solar farm in the low-price mid-day period, and selling it in the high price evening period. This is illustrated in Figure 7.



**Figure 7: Integrated solar and battery enables price 'shifting'**

## Capacity Investment Scheme

In light of the reduction in renewable energy investment, on 23 November 2023, the Federal Government announced an expansion of the CIS to target a total of 32 GW of new capacity nationally, comprised of:

- 23 GW of renewable capacity, representing a \$52bn investment; and
- 9 GW of clean dispatchable capacity, representing a \$15bn investment (an additional 7.9 GW to the 1.1 GW already in progress through the first stage of the CIS).

The CIS provides funding for the development of renewable energy capacity and is in addition to existing State and Territory Government targets.

The expanded CIS will be rolled out from 2024 to 2027, with regular competitive tenders held approximately every six months, starting in April/May 2024, for 14 GW of the CIS and the remaining 18 GW to be delivered through Renewable Energy Transformation Agreements.

Given the Reserve Capacity Mechanism in the WEM in WA, the implementation of the CIS has been considered separately for WA, and a separate design paper will be published for the implementation of the CIS in the WEM.

The Company will be well placed to apply for CIS funding, as there are only limited opportunities on the SWIS for the development of a connected generator of the Project's scale in the short or medium term.

**Authorised for release by Frontier Energy's Board of Directors.**

To learn more about the Company, please visit [www.frontierhe.com](http://www.frontierhe.com), or contact:

**Adam Kiley**  
**Chief Executive Officer**  
+61 8 9200 3428  
[akiley@frontierhe.com](mailto:akiley@frontierhe.com)

**Grant Davey**  
**Executive Chair**  
+61 8 9200 3428  
[gdavey@frontierhe.com](mailto:gdavey@frontierhe.com)





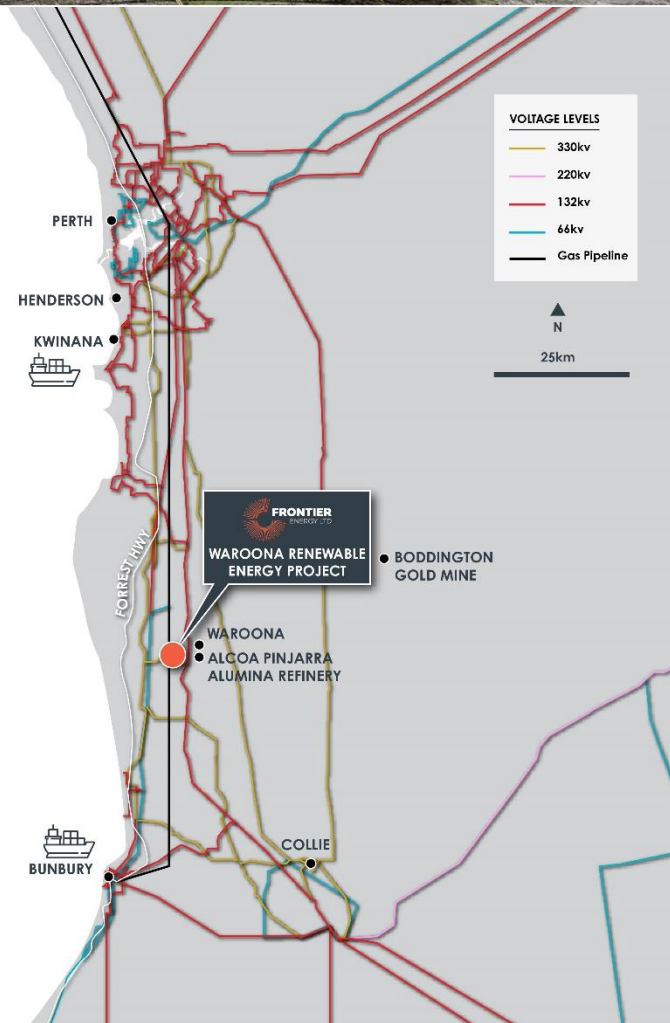
## About Frontier Energy

**Frontier Energy Ltd (ASX: FHE; OTCQB: FRHYF)** is developing the Waroona Renewable Energy Project (the Project) located 120km from Perth in Western Australia.

Waroona has potential to become one Western Australia's largest standalone renewable energy projects, as the Company controls 868ha of adjoining freehold land whilst also having approvals in place for a connection onto the WA electricity network (SWIS) with a terminal adjacent to the Project.

The Company released a positive DFS on Stage One development that consists of a 120MW solar farm and 80MW 4-hour battery which is now advancing towards a Final Investment Decision in 2024.

Frontier is fully committed to making the Project one of WA's major renewable energy hubs, incorporating multiple value-adding initiatives including batteries and green hydrogen, with full renewable energy potential of more than 1GW based on connection capacity.



### Directors and Management

**Mr Grant Davey**  
Executive Chairman

**Mr Adam Kiley**  
Chief Executive Officer

**Mr Chris Bath**  
Executive Director

**Ms Dixie Marshall**  
Non-Executive Director

**Ms Amanda Reid**  
Non-Executive Director

### Registered Office

Level 20, 140 St Georges Terrace  
Perth WA 6000

### Share Registry

Automatic Registry Services  
Level 5, 126 Philip Street  
Sydney NSW 2000

For a comprehensive view of information that has been lodged on the ASX online lodgement system and the Company website, please visit [asx.com.au](http://asx.com.au) and [frontierhe.com](http://frontierhe.com), respectively.