

## Waroona Energy commences DFS on solar power facility

**Frontier Energy Limited (ASX: FHE; OTCQB: FRHYF) (Frontier or the Company)** advises that Waroona Energy Inc. (TSXV: WHE) (**Waroona**) has commenced a Definitive Feasibility Study (DFS) for a 120MWdc solar power generation facility.

Frontier has recently announced the signing of a Letter of Intent with Waroona to acquire all the Waroona shares (the **Transaction**) not currently held by Frontier (Frontier already holds ~20% of Waroona) via a Canadian Plan of Arrangement (**Share Plan**), equivalent to an Australian Scheme of Arrangement. Frontier and Waroona have in place a collaboration agreement regarding their respective strategies for renewable energy production in Western Australia.

### HIGHLIGHTS

- **Waroona has engaged electricity and solar energy specialist Incite Energy to complete a DFS for a 120MWdc Solar Facility ("Stage One")**
  - While Frontier has already completed a DFS for a 114MW solar farm, Waroona's ground is located closer to the nearby electricity terminal and Waroona had not previously completed a DFS
- **The Waroona DFS will finalise the detailed design including site layout, equipment specification and capital cost estimate (accurate to  $\pm 15\%$ ) for Stage One development**
- **Leveraging the significant work already completed, the DFS will be completed in early 2024**
  - The Project has all major permits, approvals and an executed Electricity Transfer Access Contract and Interconnection Works Contract to WA's electricity network (SWIS) in place
  - Waroona's Study of a green hydrogen-fuelled (dual fuel) peaking power plant is also progressing and remains on track for delivery during 4Q23
- **Electricity prices continue to trend higher, averaging A\$90/MWh during the September quarter, a 25% YoY increase**
  - Prices during the afternoon peak interval averaged over A\$150/MWh, while midday low prices averaged around \$50/MWh

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**Frontier Managing Director, Sam Lee Mohan, commented:** "The development of a solar facility is a key pillar of the Company's long-term strategy to build a renewable energy hub. This strategy includes solar production, green hydrogen production from solar energy, as well as green hydrogen consumption in a hydrogen-fuelled peaking power plant.

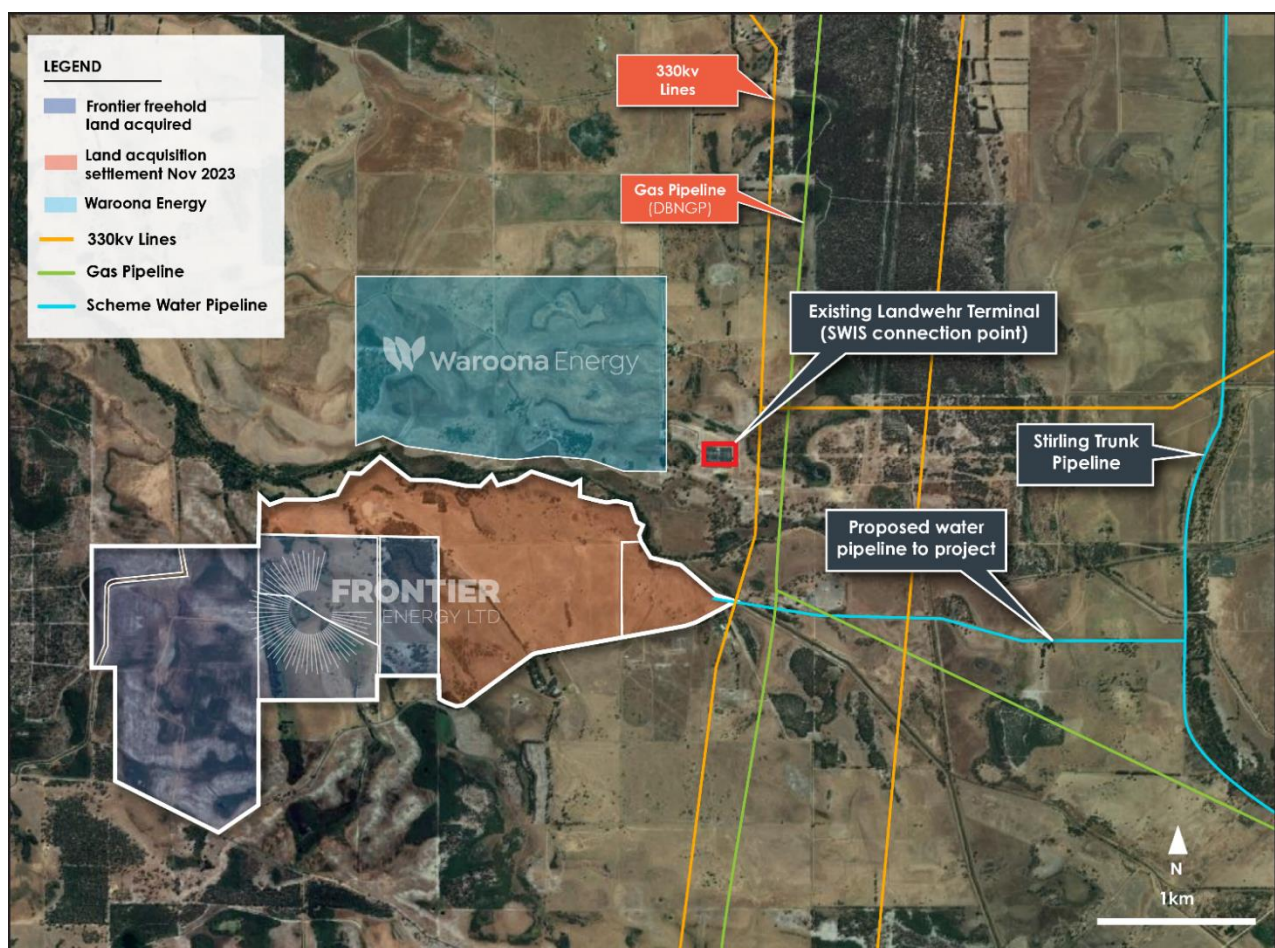
Given our existing collaboration agreement with Waroona, and the recently announced transaction that will combine the two companies, it makes logical sense to prepare for construction of the Stage One solar facility on a site that is located nearest the electricity terminal. As significant work has been completed on solar power generation already (including in Frontier's DFS), Waroona's solar DFS can be fast tracked and completed by early 2024.

The Company remains on track to meet its target to commence solar development during 1H2024."

## Waroona DFS for 120MWdc solar farm underway

Waroona has appointed electricity and solar energy specialist Incite Energy Pty Ltd (**Incite**) to complete a DFS for a 120MWdc Solar Facility ("Stage One") at the Waroona Renewable Energy Project. The Company has an approved Declared Sent Out Capacity (**DSOC**) of 241MWdc from Western Power, of which Stage One will be targeting to deploy 120MWdc.

While Frontier had previously completed a DFS for a 114MWdc solar farm at the Bristol Springs Project (located on the purple shaded area in Figure 1 below), the Waroona Project is located closest to the electricity terminal (only 300m away – as shown in Figure 1 - teal shaded area) and is the most cost-effective location for Stage One of a combined development. Waroona had not previously completed a DFS.



**Figure 1: Frontier and Waroona's projects and nearby infrastructure in South-West WA**

Incite was selected through a competitive tender process due to its expertise in the industry and its exceptional track record, including several operational utility-scale projects across Australia (ranging from 50MW - 300MW) and multiple utility-scale solar farms and load connections currently in early-stage development in Western Australia.

The Scope of work for the DFS includes:



1. Layout – considering clearing limitations, flood studies, road servitudes, drainage channel, and allocating areas for future Peaker Plant and hydrogen plant
2. Design
3. Equipment specification and supplier quotations
4. Update and refinement of geotechnical information
5. Construction and commissioning scope and costing
6. Interfacing with Western Power



**Figure 2: Artist impression of the Solar facility and peaking plant on Waroona’s landholding**

A DFS was preferred to appointing an EPC contractor to carry out an early works program as had been contemplated previously<sup>1</sup>. This decision was made as it more cost effective, both in the short and long term.

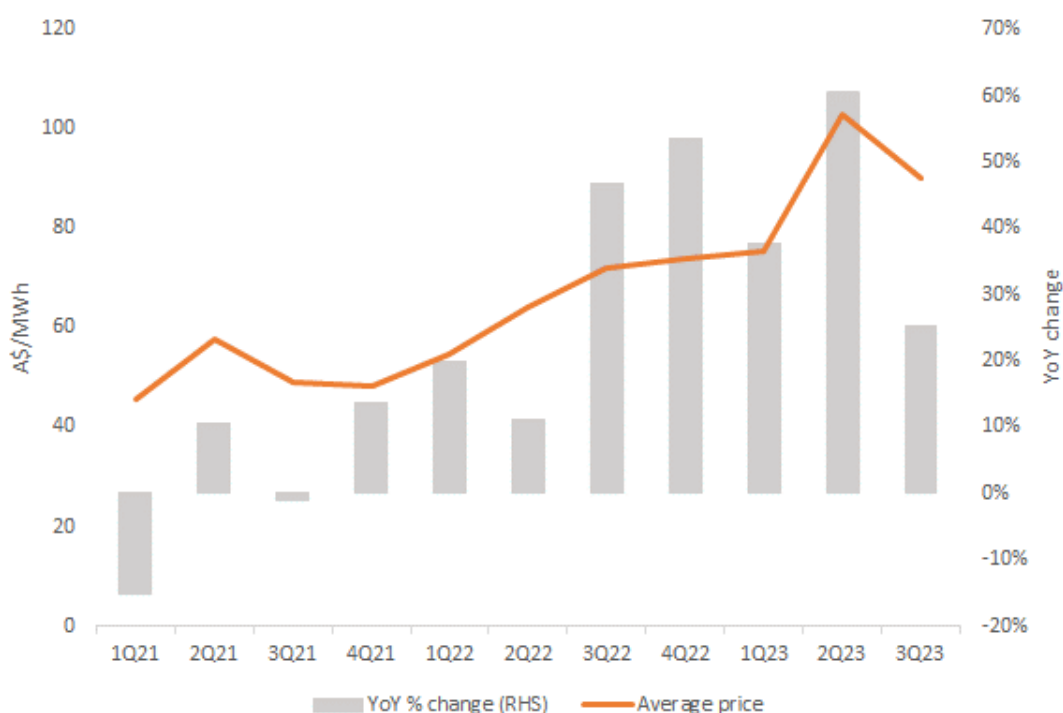
This approach allows the Company to consider a more flexible approach through the construction phase, as it allows for the Company to manage procurement of key equipment, including critical path long lead items, in-house. This would likely reduce the overall capital requirement whilst having no material impact on timing to Final investment Decision (FID). The Stage One DFS will be delivered in early 2024.

<sup>1</sup> See ASX Release 4 August

## Year-on-year electricity price increases continued through the September quarter

As outlined in a previous announcement<sup>2</sup>, the Wholesale Energy Market ('WEM') consists of a market for electricity, via the South West Interconnected System ('SWIS'). A unique feature of the WEM is the Reserve Capacity Mechanism, which ensures that there is enough generation to meet demand at all times.

Wholesale electricity prices continued to increase, with the September quarter average wholesale price of \$90/MWh representing a 25% YoY increase.



**Figure 3 – WEM quarterly price, 2021 to present<sup>3</sup>**

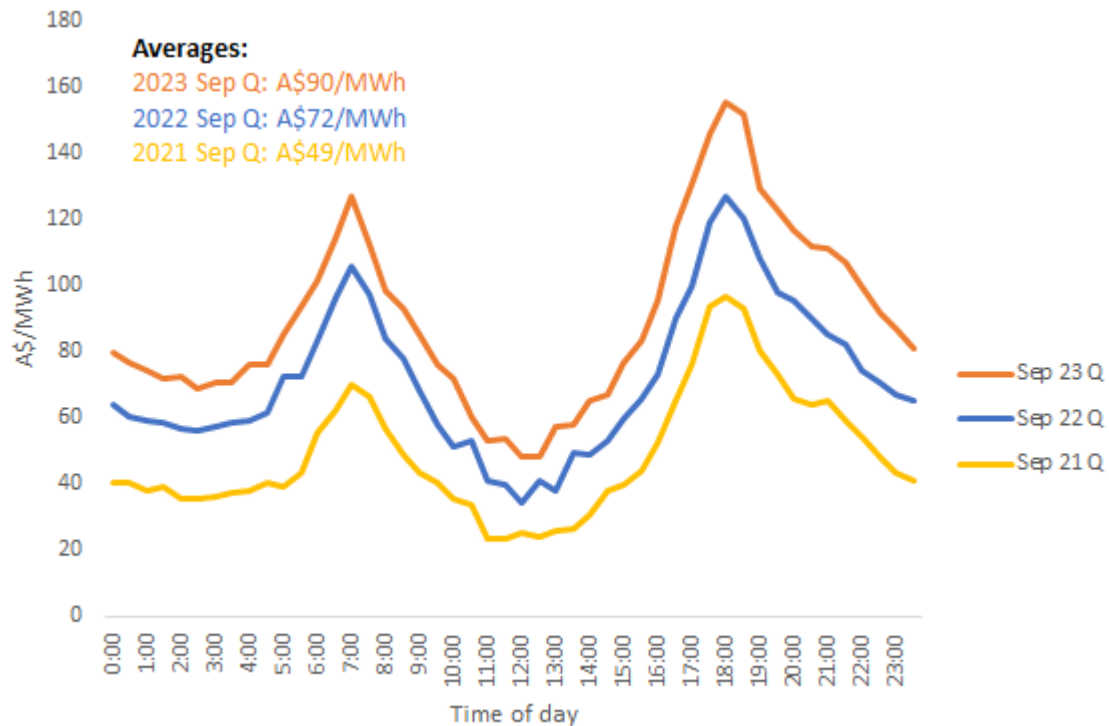
Wholesale electricity pricing fluctuates significantly over time, driven by the demand fluctuations at certain times of day and in certain seasons, as well as the availability of renewable power (i.e. when the sun shines and the wind blows).

Figure 4 compares the most recent quarter's electricity prices to previous September quarters (to compare like-for-like seasonality). Figure 4 shows clearly the progression over time of WEM electricity prices, with both daily price peaks and lows increasing consistently and sharply over the period. Peak time prices in the September 2023 quarter reached above \$150/MWh during the afternoon peak and above \$125/MWh during the morning peak - both

<sup>2</sup> See ASX announcement 20 June 2023

<sup>3</sup> Source: AEMO

unprecedented for a September quarter; midday low prices averaged around A\$50/MWh, up significantly from previous years.



**Figure 4 – Average quarterly wholesale power price (\$/MWh), in each half hour interval<sup>4</sup>**

**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:

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<sup>4</sup> Source: AEMO



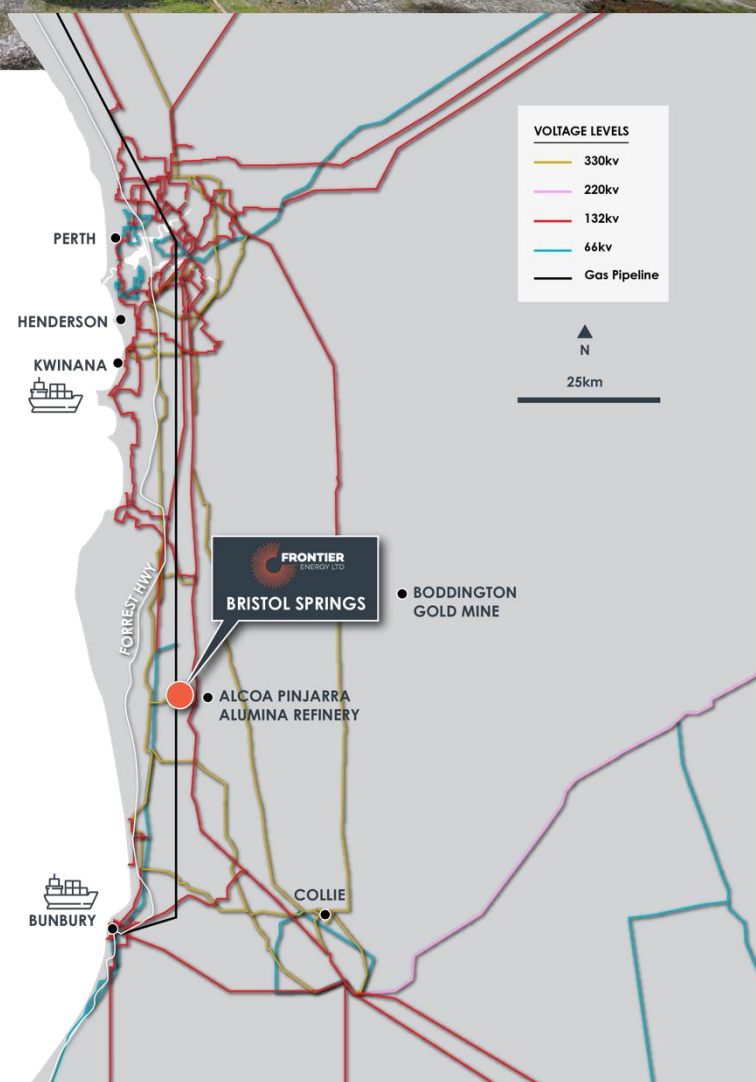
## About Frontier Energy

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

The Company recently completed a Definitive Feasibility Study<sup>1</sup> that outlined the Project's potential to be both an earlier mover and one of the lowest cost green hydrogen assets in Australia.

The Project benefits from its unique location surrounded by major infrastructure. This reduces operating and capital costs compared to more remote hydrogen projects, whilst also being surrounded by likely early adopters into the hydrogen industry in the transition from fossil fuels.

<sup>1</sup>ASX Announcement 20<sup>th</sup> March 2023



### Directors and Management

**Mr Sam Lee Mohan**  
Managing Director

**Mr Grant Davey**  
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**Mr Chris Bath**  
Executive Director

**Ms Dixie Marshall**  
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**Ms Amanda Reid**  
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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](https://asx.com.au) and [frontierhe.com](https://frontierhe.com), respectively.