Waroona Energy Inc. appoint GHD to deliver Dual Fuel Green Hydrogen Peaking Plant Study

Frontier Energy Limited (ASX: FHE; OTCQB: FRHYF) (**Frontier** or the **Company**) notes Waroona Energy Inc. **(TSXV: WHE)** (**Waroona**), who Frontier is major shareholder with a 20% interest, appointed leading global engineering firm, GHD, to deliver a Definitive Feasibility Study ("DFS") for a Dual Fuel Hydrogen Peaking Plant at their Waroona Renewable Energy Project in WA. This project is adjacent to the Company's Bristol Spring Project.

As previously highlighted (ASX Announcement – 20th June 2023), having a clear pathway for green hydrogen consumption that requires no technological advancements, mass adoption or legislative changes, is essential to be an early mover in green hydrogen, globally. Dual Fuel Hydrogen Peaking Plant achieve all these criteria.

Further details of this announcement are attached or can be found at Waroona's website https://waroonaenergy.com/.

Authorised for release by Frontier Energy's Board of Directors.
To learn more about the Company, please visit www.frontierhe.com, or contact:

Directors and Management

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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 and frontierhe.com, respectively.

Leading global engineering firm GHD appointed to deliver Dual Fuel Green Hydrogen Peaking Plant Study

Waroona Energy Inc. (TSXV: WHE) ("Waroona" or the "Company") is pleased to announce the appointment of leading global engineering firm, GHD, to deliver a Study to assess a Dual Fuel Hydrogen Peaking Plant ("Peaking Plant") at the Company's Waroona Renewable Energy Project (the "Project") in Western Australia ("WA").

The Company is pursuing this opportunity as it believes existing markets where green hydrogen can substitute/replace current carbon emitting fuel sources, without the requirement for technological advancements, mass adoption or legislative changes, are the most likely first consumers of green hydrogen. The Company has an existing connection to the WA electricity network (SWIS) and dual fuel peaking plant technology is well understood.

HIGHLIGHTS

- **Global engineering firm, GHD, has been appointed to deliver a Study for a Dual Fuel Green Hydrogen Peaking Plant at Project. The Study is due to be completed during 4Q2023**
- **Dual Fuel Peaking Plants are a mature technology and are used to supply energy to a market typically during peak periods of high demand (and pricing) for electricity**
    - *The Company has an existing connection to the WA electricity grid*
- **Electricity demand in WA (South West Interconnected System – SWIS) is forecasted to increase to an estimated 50 GW of new generation and storage capacity required by 2042. Total utility-scale generation capacity on the SWIS in 2022 was just 5.9 GW**
    - *Average electricity prices in WA increased by 46% to $79/MWh (previously $54/MWh) over the past 12 months*
    - *Peak energy prices (4pm – 8pm) in June 2023 increased by over 130% to $203/MWh compared to $87/MWh in the previous year (Source: AEMO)*
- **The WA Government plans to legislate a renewable hydrogen target of 1% for electricity generation on the SWIS**

Adam Kiley, President and CEO, said: "*It has become clear to be a first mover in the green hydrogen industry, you not only need the ability to deliver hydrogen at a low cost, but you also need a clear pathway to consumption.*

A dual fuel peaking plant delivers this, as the technology is well understood, the market (electricity) is already in place (and demand is increasing) whilst there are also no legislative or regulatory amendments required to commence production.

In addition to this, it is become clear that energy prices are likely to remain high over the next decade (at least) as the world accelerates its transition to renewable energy solutions. Waroona is strategically positioned to ensure it will be central to this transition in Western Australia."

GHD Appointed as Lead Engineer for Green Hydrogen Peaking Plant Study

The Company has appointed GHD as Lead Engineer to complete a Study (Class three cost estimation – AACE International) assessing a dual fuel green hydrogen peaking power at the Project. The Scope of the Study is outlined below.

- Technology assessment of current peaking plant technologies based on a minimum of a 100 MW capacity. This assessment will include:
  - Peaking Plant technology selection
  - Gas storage facility concept design
  - Assessment of EPC costs and performance of selected technology
- Capital and operating cost estimate based on the recommended technology
- Preliminary Hazard Assessment
- Energy Market Review with revenue streams identified
- Emissions assessment
- Permitting and approvals strategy

The Study will be completed in 4Q2023. Frontier Energy Ltd (FHE.ASX) will assist with the Study under the existing Collaboration Agreement between the companies. Frontier released a DFS on its adjacent Bristol Springs Hydrogen Project in March 2023, which highlighted the project's potential to be one of the lowest cost hydrogen projects in Australia.

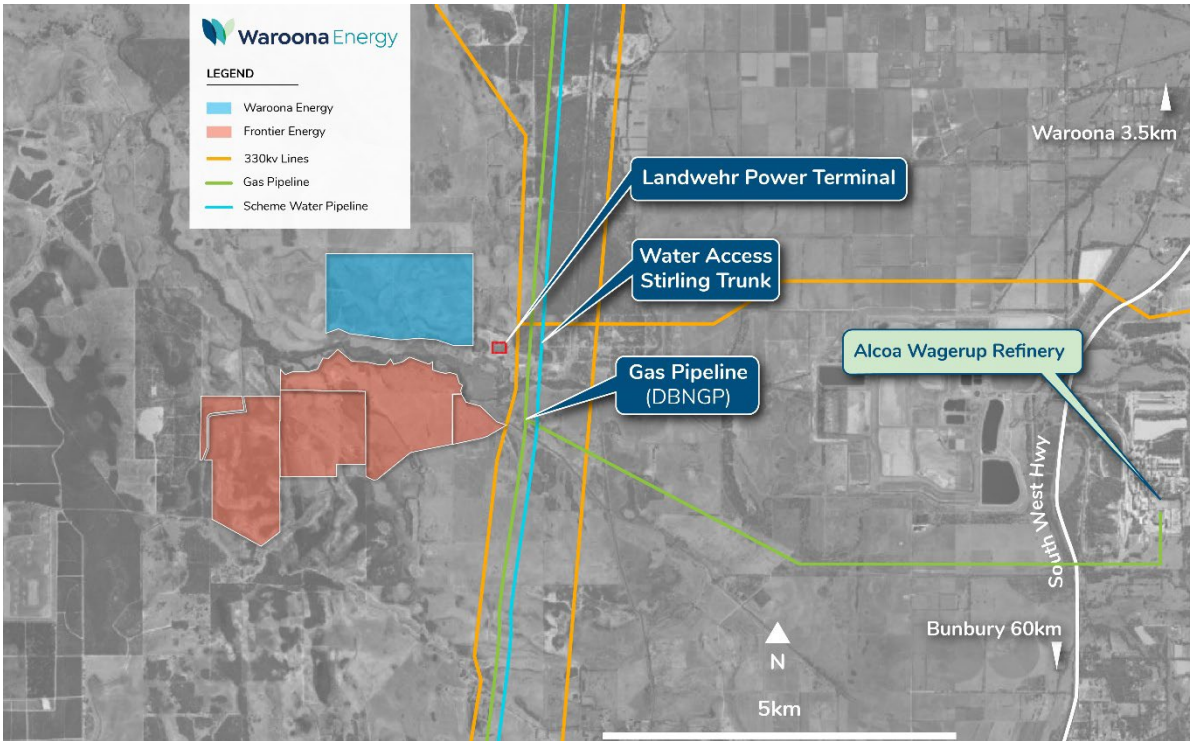

Image 1: Project location of Waroona Renewable Energy Project and Frontier Energy's Bristol Springs Project

Overview of the Electricity Market in WA

The WA Government's recent SWIS demand assessment[1] indicates demand for renewable energy will increase significantly over the next two decades. Under the Future Ready scenario, more than 50 GW of new generation and storage capacity would be required to supply load growth in the SWIS by 2042.

The overwhelming majority of this new generation capacity is large-scale wind and solar (41.8 GW) as these are the most commercially viable technologies. By comparison, total utility-scale generation capacity in the SWIS in 2022 was 5.9 GW, with approximately 1.2 GW of this being large-scale wind and solar, and 3.1 GW being gas-fired generation[1].

This increase in demand is coupled with the announced closure of all of WA's coal fired capacity by 2030[2]. Coal fired power generation currently accounts for approximately 27% of electricity generated on the SWIS per annum.

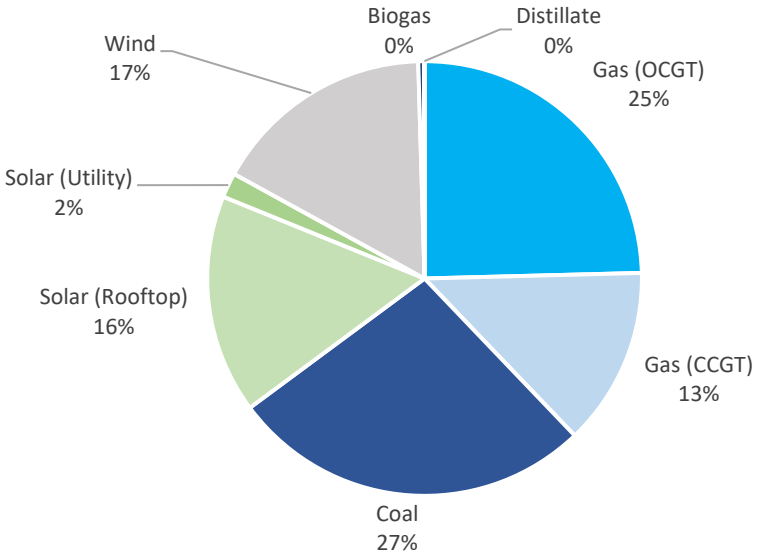

Image 2 – SWIS energy generation, twelve months to June 2023[3]

While the Government has announced plans for an additional major battery storage to assist in the transition away from base load coal generation, significant expansion of renewable energy solutions is required immediately to ensure Australian renewable energy target of 82% by 2030 is achieved[4].

1 https://www.wa.gov.au/government/document-collections/swis-demand-assessment
2 https://www.wa.gov.au/government/announcements/state-owned-coal-power-stations-be-retired-2030-move-towards-renewable-energy
[3] https://opennem.org.au/energy/wem/
[4] www.iea.com

Pricing Mechanisms

The Wholesale Electricity Market (WEM) in Western Australia consists of two key components:

- **Wholesale market** - where market participants interact to supply and purchase electricity. The average electricity price on the WEM has increased significantly during the past 12 months increasing from circa $54/MWh to $79/MWh.

  The average electricity price during June increased to record highs of $126/MWh compared to $66/MWh during the previous year. Figure 2 below highlights the trend in electricity prices during the past 30 months.

- **Reserve Capacity Credits**[5] - where electricity generators are paid for the back-up energy generation capacity they make available. The reserve capacity price is $193,400/MW[6] for 2025/26 which can be secured for five years.

Wholesale market pricing

Wholesale market pricing can fluctuate significantly, driven by numerous factors including the currently installed power generating assets, time of the day, as well as the season (summer to winter).

These factors result in significant price fluctuations, as can be seen in Image 3 and Image 4 below. These Figures show both the average and maximum monthly power prices for each 30-minute interval for each month from January 2021 until June 2023. The Figures below highlights price increments in different colours:

- Pink - greater than $140/MWh
- Orange – between $120/MWh and $140/MWh
- Yellow – between $100/MWh and $120/MWh
- Green - between $80/MWh and $100/MWh
- Blue - between $40/MWh and $80/MWh
- Grey - less than $40/MWh

[5] https://www.erawa.com.au/cproot/23061/2/Notice---Benchmark-Reserve-Capacity-Price-2025-26---Publication-of-Final-determination.pdf

[6] https://www.erawa.com.au/cproot/23058/2/-BRCP.2023---2023-benchmark-reserve-cap_e-for-the-2025-26-capacity-year---Final-Determination---for-publication-clean-.PDF

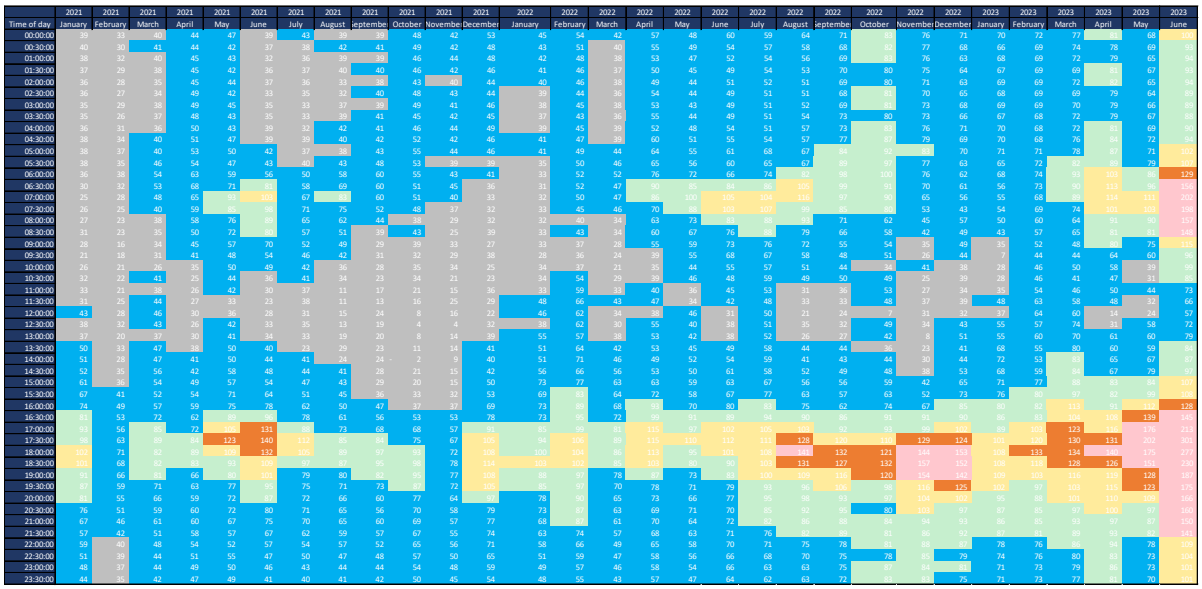

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Image 3 – Average monthly wholesale power price ($/MWh) in each half hour interval[7]

Image 3 shows several trends emerging in the half hourly average WA energy price, all of which support the case for a dual fuel peaking plant. First, the afternoon peak period is increasing in duration from an average interval period of around 2 to 4 hours in 2021 and 1H22, to between 5 to 6 hours constantly through 2H22 and 2023.

Secondly, there is the emergence of a new high price trend (+$120/MWh) emerging between 5pm to 8pm, evident for the past 10 months. Finally, there is also a new early morning trend appearing between 6am and 8am (except for the summer months), where peak prices are also increasing noticeably.

The average peak 6-hour peak price (3pm to 9pm) price during the past 12 months was an average of $110/MWh compared to $77/MWh in the year before. The average price however reached record average high during June 2023 of $183MW compared to $85/MWh in June 2022.

Image 4 below shows the maximum price over the same time period, in similar half hour intervals.

[7] Source: AEMO

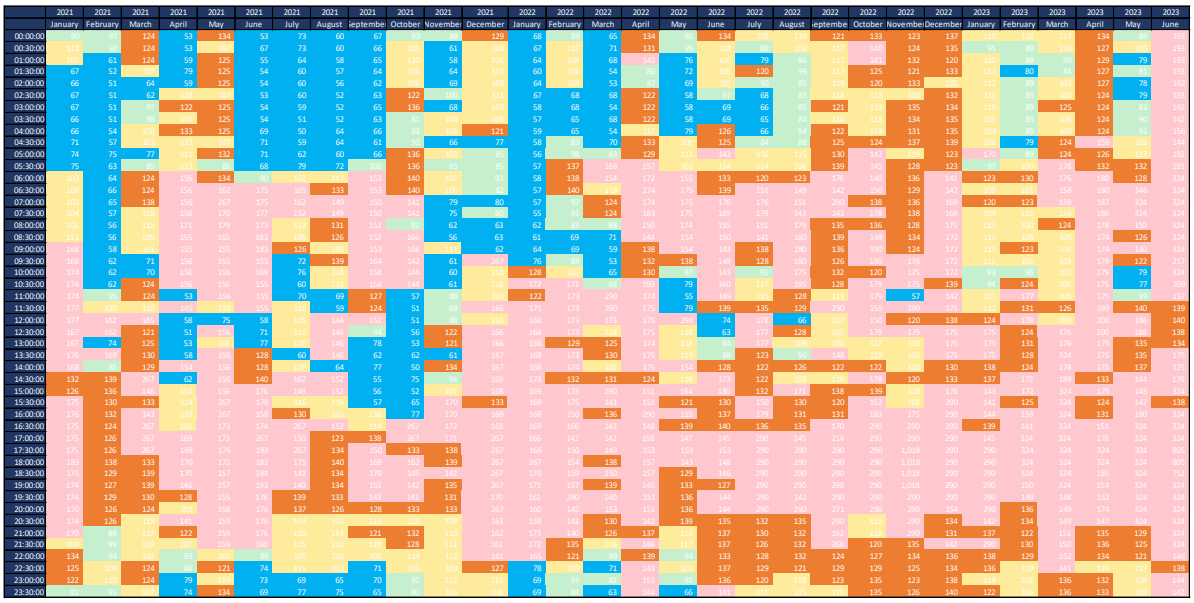

Image 4 – Maximum monthly wholesale power price ($/MWh), in each half hour interval[8]

This chart highlights that a peaking plant can take advantage of high price periods throughout the year, and there is an increase in the number of maximum price periods in pink (price +$140/MWh) over time.

Reserve Capacity Mechanism (RCM)

The RCM is an administered capacity market and is designed to ensure that there is adequate generation capacity available in the system to meet forecast peak electricity demand (plus a margin to allow for forecast errors or plant failures).

Under the RCM, electricity generation plants are certified and allocated capacity credits. Electricity retailers are required to procure capacity credits in proportion to their share of the electricity load in the twelve Peak SWIS Trading Intervals[9]. The retailers may meet this obligation by either purchasing capacity credits directly from electricity generators such as Frontier, under bilateral contracts or procuring capacity credits via the Australian Energy Market Operator (AEMO) at an administered price (known as the Reserve Capacity Price or RCP).

A price of $193,400 per MW has been announced by AEMO for the 2025/26[10] capacity year. A 100MW peaking plant for example, would generate revenue of $19.3 million in 2025/26. The Reserve Capacity mechanism guarantees revenue for up to five years, which would be attractive to debt financiers, given it provides a certain, fixed revenue stream.

[8] Source: AEMO

[9] https://www.aemo.com.au/energy-systems/electricity/wholesale-electricity-market-wem/wa-reserve-capacity-mechanism/certification-of-reserve-capacity

[10] https://www.erawa.com.au/cproot/23058/2/-BRCP.2023---2023-benchmark-reserve-cap_e-for-the-2025-26-capacity-year---Final-Determination---for-publication-clean-.PDF

The WA Government[11] is considering a package of further WEM reform initiatives aimed at enhancing investment certainty for renewable and storage proponents in the SWIS. This includes lengthening the period of reserve capacity price guarantee and introducing emissions thresholds, among other things.

Implementation

Peaking plants are an established part of electricity networks throughout the world, including Western Australia. This is arguably the most mature pathway for early hydrogen consumption, given peaking plants are not new technology and can consume hydrogen as fuel.

Waroona has a major advantage in this regard with a connection already in place at Landwehr Terminal, located less than 1km from the Project. Waroona has secured an Electricity Transfer Access Contract with Western Power. No further access is available to third parties.

Given the transition to net zero being undertaken in Australia and WA, Waroona believes it will be more challenging to build and connect a natural gas-fired peaking plant onto any electricity network in Australia, without a clear and defined pathway for decarbonisation (such as using renewable hydrogen as a fuel, as Waroona is planning to do).

ON BEHALF OF THE BOARD

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Cautionary Note Regarding Forward-Looking Statements

Certain statements contained in this news release constitute forward-looking statements within the

Certain statements contained in this news release constitute forward-looking statements within the meaning of Canadian securities legislation. All statements included herein, other than statements of historical fact, are forward-looking statements and include, without limitation, statements about the Company's development plans for the Project and the studies on a potential Peaking Plant. Often, but not always, these forward looking statements can be identified by the use of words such as "estimate", "estimates", "estimated", "potential", "open", "future", "assumed", "projected", "used", "detailed", "has been", "gain", "upgraded", "offset", "limited", "contained", "reflecting", "containing", "remaining", "to be", "periodically", or statements that events, "could" or "should" occur or be achieved and similar expressions, including negative variations.

Forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Company to be materially different

[11] https://www.wa.gov.au/government/document-collections/swis-demand-assessment#:~:text=The%20assessment%20found%20that%20the,over%20the%20next%2020%20years.

from any results, performance or achievements expressed or implied by forward-looking statements. Such uncertainties and factors include, among others, the uncertainties inherent in the estimated economics of the Project, and whether the Company will arrange any offtake related financing; whether exploration and development of the Company's properties will proceed as planned; changes in general economic conditions and financial markets; the Company or any joint venture partner not having the financial ability to meet its exploration and development goals; risks associated with the results of exploration and development activities, estimation of mineral resources and the geology, grade and continuity of mineral deposits; unanticipated costs and expenses; risks associated with COVID-19 including adverse impacts on the world economy, exploration and development efforts and the availability of personnel; and such other risks detailed from time to time in the Company's quarterly and annual filings with securities regulators and available under the Company's profile on SEDAR at www.sedar.com. Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results to differ from those anticipated, estimated or intended.

Forward-looking statements contained herein are based on the assumptions, beliefs, expectations and opinions of management, including but not limited to: the accuracy of the estimated economics of the Project; that the Company will arrange offtake related financing; that the Company's stated goals and planned exploration and development activities will be achieved; that there will be no material adverse change affecting the Company or its properties; and such other assumptions as set out herein. Forward-looking statements are made as of the date hereof and the Company disclaims any obligation to update any forward-looking statements, whether as a result of new information, future events or results or otherwise, except as required by law. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, investors should not place undue reliance on forward-looking statements.