

## Definitive Feasibility Study confirms strong financial returns, rapid payback for Waroona Renewable Energy Project

Frontier Energy Limited (ASX: FHE; OTCQB: FRHYF) (Frontier or the Company) is pleased to announce completion of a Definitive Feasibility Study (DFS or Study) for Stage One of its Waroona Renewable Energy Project in WA, comprising a 120MWdc solar facility and an integrated four-hour 80MW battery (the Project).

### HIGHLIGHTS

- Study confirms the Project as a long life, low operating cost and highly profitable renewable energy project. The Project is now advancing towards a Final Investment Decision (FID)
- Project generates average EBITDA<sup>1</sup> of \$68 million pa over first five years of production and \$63m pa over first 10 years of production
  - Aurora Energy Research provided independent revenue forecasts for the Project
- Post-tax payback<sup>1</sup> of 5.8 years (4.6 years pre-tax) based on \$304m total initial capital cost
- Leveraged<sup>2</sup> post-tax Internal Rate of Return (IRR) is 21.6%<sup>1</sup> and pre-tax IRR of 27.3%<sup>1</sup>. 100% equity financed post-tax IRR is 14.8%<sup>1</sup> and the pre-tax IRR is 18.0%<sup>1</sup>
  - Frontier expects to earn a highly leveraged return, based on the Company's financing strategy and initial debt market soundings
- First year solar energy generation forecast at 258GWh<sup>3</sup>, with 119GWh discharged/sold through the battery (in peak periods) and 115GWh discharged from direct solar generation (daytime market) into the WA Wholesale Electricity Market (WEM)
  - The average energy price forecast over the life of the operation is \$143/MWh<sup>4</sup> (peak periods) and \$80MWh<sup>4</sup> (solar price), in line with 2023 actual prices on the WEM
- Stage One utilises only a third of Frontier's 868ha landholding and represents a fraction of total long-term potential generation the Project can unlock
- Barrenjoey appointed as Corporate Advisor to assess strategic partnerships for Stage One development and future expansion opportunities
  - The Company received multiple unsolicited approaches over the past year from a range of multi-nationals, global renewable energy producers and industrial firms expressing interest in the Project
- Debt financing discussions commenced; Frontier expects indicative terms during 2Q24

<sup>1</sup> Nominal – Base Case Scenario

<sup>2</sup> 70% leverage assumptions – subject to confirmation during debt financing process

<sup>3</sup> Year one forecast production

<sup>4</sup> Real – Aurora Financial Assumptions – Base Case

**CEO Adam Kiley commented:** "Our Stage One DFS delivers an excellent result and highlights Frontier's fantastic and unique opportunity to be a near-term major renewable energy producer in Western Australia.

This comes at a time when energy demand continues to outpace supply in WA, resulting in electricity prices reaching record highs. Just last week, record peak demand on the South West Interconnected System was surpassed once again, with the top six operational demand peaks ever recorded in the state's main grid all happening between January 31 and Feb 19 this year. Unfortunately, the majority of the energy to meet this record demand peak came from carbon emitting sources, with 58% being gas and 32% being coal generated. This highlights the urgent requirement for renewable energy storage solutions, such as our 100% renewable energy Waroona solar/battery project, to quickly come online.

Highlights of the Study include exceptionally strong financial returns under all key metrics, including forecast EBITDA averaging \$68m per annum over the first five years of production.<sup>5</sup>

These strong returns drive a rapid post tax payback of 5.8 years, or 19% of the project life of 30 years. A major contributor to this is the Reserve Capacity Payment, a feature unique to WA, which is forecast to provide revenue of about \$28m per annum during the first five years of production.

We aim to now move rapidly towards a Final Investment Decision by mid-2024. Central to this is finalising our funding strategy. Debt financing work is well underway – we have NDAs signed with multiple banks and an Information Memorandum and data room ready for banks shortly.

We have also appointed Barrenjoey, a leader in renewable energy transactions in Australia, as Corporate Advisor to assess strategic development partnerships. This follows multiple unsolicited approaches over the past year from a range of multi-nationals, global renewable energy producers and industrial firms expressing interest in the Project.

The Company will assess the merits of a strategic partner, in association with debt financing, as we aim to minimise dilution. We also believe the right partner will help accelerate our future expansion opportunities, given Stage One is only about 10% of the total long-term potential generation the Project can unlock."

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<sup>5</sup> All financial assumptions were based on independent forecasts for energy prices in WA, detailed in Section 9 of this Report.

### **Cautionary Statement**

The DFS has been undertaken to assess the economic feasibility of a 120MWdc Solar Farm with an 80MW four-hour battery (Stage One of the Project). The DFS provides engineering studies and estimates for costs and rates of return that support the technical and financial viability of Stage One of the Project thus enabling the Company to move to develop a debt and equity funding solution, update key approvals and thereafter a FID can be made.

Investors should note that there is no certainty that the Company will be able to raise funding when needed. It is also possible that such funding may only be available on terms that are dilutive or otherwise affect the value of the Company's existing shares.

The Company has concluded that based on the results of the Study and strong market fundamentals there is a sufficient degree of confidence to progress Stage One of the Project further. However, given the uncertainties involved, investors should not make any investment decisions based solely on the results of this Study.

### **Forward-Looking Statements**

This release contains 'forward-looking statements' that are based on the Company's expectations, estimates and projections as at the date of the statements. All statements, trend analysis and other information contained in this announcement relative to markets for the Company, trends in energy markets, production quantities and anticipated expense levels, as well as other statements about anticipated future events or results constitute forward-looking statements. Forward-looking statements are often, but not always, identified by the use of words such as "seek", "anticipate", "believe", "plan", "estimate", "expect" and "intend" and statements that an event or result "may", "will", "should", "could" or "might" occur or be achieved and other similar expressions.

Forward-looking statements and information are subject to known and unknown risks, uncertainties and other factors that could cause actual results to differ materially from those contained in the forward-looking statements. This includes factors such as: general business, economic, competitive, political and social uncertainties; outcome of further economic valuations; regulatory and political changes on energy production and consumption, decarbonisation and climate change related matters both at federal and state level; the cost to procure and build plant and equipment including the impact of inflation and the availability of contractors to do; supply chain disruption, delay and cost increases; delays in government approvals or other government steps needed to support renewable energy projects; the ability of the Company to secure financing and the cost and terms of such financing.

Forward-looking statements are based on estimates and opinions of management at the date the statements are made. The Company does not undertake any obligation to update forward-looking statements even if circumstances or management's estimates or opinions should change. Investors should not place undue reliance on forward-looking statements.

## Executive Summary

The Waroona Renewable Energy Project is located in the South West region of Western Australia, approximately 120km from Perth and 8km from the town of Waroona. A key strategic advantage is the proximity to the Landwehr Terminal which is located within 0.5km of the Project. The Company has secured access to a network connection, enabling the sale of electricity into the South West Interconnected System (**SWIS**), on one of the least constrained portions of the electricity transmission network.

The Company engaged specialist renewable energy engineering consultants Incite Energy and SpringCity to complete engineering and cost studies to provide a Class 3 CAPEX and OPEX estimate (10% - 15% accuracy). Their studies assessed the case for solar energy production and battery storage based on 120MW DC (megawatt direct current) solar plant with integrated 80MW four-hour battery. The key project assumptions determined by the Study are highlighted in Table 1 below.

Key Assumptions	Unit	DFS Yr 1
Life of operation	Years	30
<b>Solar</b>		
Energy production (Yr 1)	GWh	258
Annual degradation	%	0.5
Availability	%	98
<b>Battery</b>		
Nominal capacity	MW	80
Storage capacity	MWh	320
Annual degradation (average over first 20 years, varies by year)	%	1.3
Energy sold (pa)	GWh	120
Charge / discharge loss factor	%	15
<b>Costs – Operating<sup>1</sup></b>		
Total (Real)	A\$ m pa	\$5.0
<b>Capital</b>		
Integrated solar and battery	A\$ m	\$304.0

**Table 1: Key project assumptions**

<sup>1</sup> – Excludes financing, depreciation and corporate costs

The Study forecasts annual renewable electricity generation of approximately 258GWh (year one). Of this, 120GWh is stored in integrated DC coupled batteries and sold in the WEM at peak demand times, with a charging and discharging efficiency loss of 15% or 18GWh.

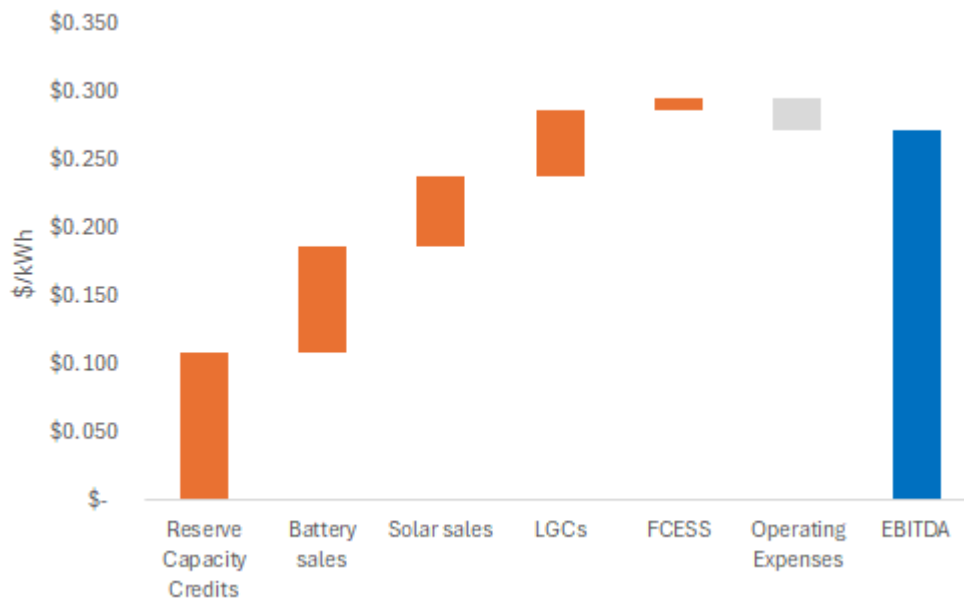
The key advantage of integrating the battery with the solar array is that this enables solar electricity, typically generated during the time of day when there is an oversupply of electricity and prices are low or negative, to be stored and sold during the time of day when there is peak demand and prices are at their highest. This not only results in an optimisation of revenue, it also enables the Project to receive increased Reserve Capacity Payments (**RCPs**).

In the Base Case price forecast scenario, the Study shows capacity to generate on average \$74m per annum in revenue, as illustrated in Table 2 below. The largest portion of revenue, 33%, is from battery RCPs, which are a fixed revenue stream that can be locked in for five years.

Revenues		Year 1	5-year Av.
Reserve capacity credits - Battery	\$m	24.8	24.7
Reserve capacity credits - Solar	\$m	2.3	2.4
Battery power	\$m	16.9	19.6
Solar power	\$m	8.9	12.9
LGCs	\$m	12.9	12.1
FCESS	\$m	1.7	2.2
<b>Total Revenue</b>	<b>\$m</b>	<b>67.7</b>	<b>74.0</b>

**Table 2: Project Revenue – Base Case Scenario**

Operating costs are ~\$5m per annum (real) and this results in the Project generating annual EBITDA of \$68m in the first five years of operation, or ~27c/kWh. Figure 1 shows the key revenue and cost drivers on a \$/kWh basis.



**Figure 1: EBITDA waterfall**

This strong profitability drives a payback period of 5.8 years and pre-tax unleveraged project IRR is 18.1% and post-tax IRR of 14.8 %.

The Project has potential to carry significant debt, given the industry, life of the operation and the high operating margins, this allows for a high level of gearing. The model has assumed approximately 70% gearing. At this level of the pre-tax IRR is 27.3% and post-tax IRR of 21.6%.

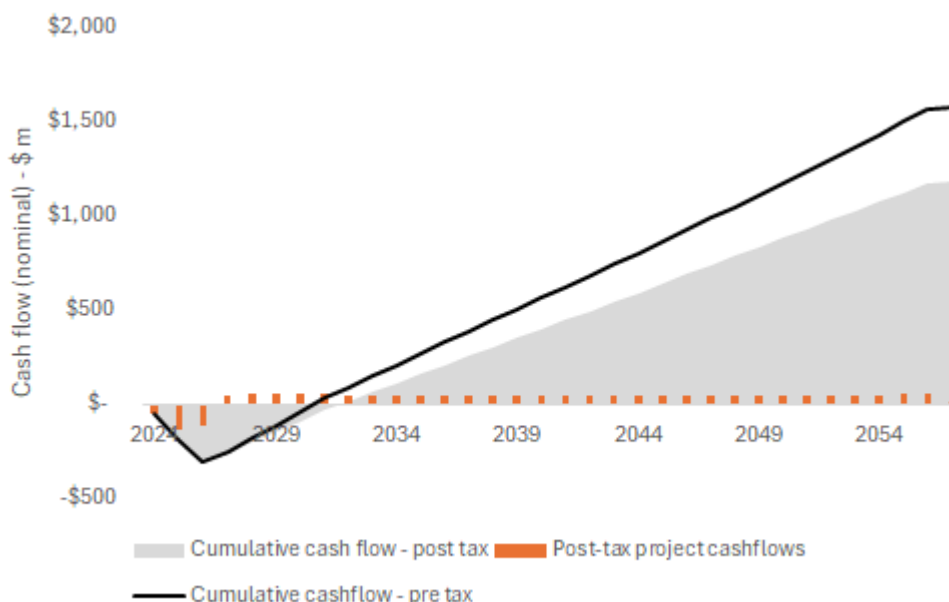
Project Cash flows	Unit	5-year average
EBITDA	\$m	68.1
Returns – Project ungeared	Unit	Number
Payback period	years	5.8
Pre-tax IRR – ungeared project	%	18.1
Post-tax IRR – ungeared project	%	14.8
Post-tax NPV <sup>7%</sup>	\$m	262
Target funding parameters <sup>1</sup>		
Gearing	%	70
Indicative return on equity <sup>2</sup>		
Pre-tax IRR	%	27.3
Post-tax IRR	%	21.6

**Table 3: Project Returns – Base Case Scenario**

1 – Debt funding is indicative, subject to completion of the project financing process

2 – Equity returns and NPV estimates are indicative, subject to completion of the project financing process

The modelled life of operation cumulative post tax cash flow (nominal) totals \$1.2Bn, as shown in Figure 2. Strong cash flow generation can be applied to expansions, life extensions and / or future dividends.



**Figure 2: Cumulative Cash Flows**

A stress-test revenue pricing scenario, containing a more optimistic view on future supply of new energy in the SWIS and lower price forecasts, was also assessed. Even under these more pessimistic pricing scenarios, the Project metrics remain robust.

Stats		Base Case	Stress Test
Revenue – First 5 Yr (Average)	A\$ m	74.0	60.7
EBITDA – First 5 Yr (Average)	A\$ m	68.1	54.8
Payback	Yrs.	5.8	7.2
IRR - Unleveraged (Pre tax / Post Tax)	%	18.1 / 14.8	14.7 / 12.0
IRR - Leveraged (Pre tax / Post Tax)	%	27.3 / 21.6	25.7 / 21.1
Project NPV <sub>7%</sub> - Post tax	A\$ m	262	158

**Table 4: Base Case and Stress Test Scenarios**

## Next Steps

Frontier has engaged Leeuwin Capital Partners, debt capital advisors, to facilitate a debt process and support Frontier's interactions with banks and other financial institutions who are playing a leading role in financing construction of renewable energy projects. With the DFS now complete, Frontier has commenced more detailed discussions with these institutions and is seeking financing offers aligned with the outcomes of the DFS which will ultimately support the FID.

In addition, Frontier has retained Barrenjoey as a financial advisor to co-ordinate engagement with potential strategic investors. Frontier has taken this position following multiple unsolicited approaches over the past 12 months. Partnering with a strategic investor could potentially minimise dilution of existing shareholders as well as accelerate the Projects expansion past Stage One's development.

The Company intends to make FID in mid-2024.

In addition to the Stage One development, Frontier continues to assess expansion opportunities. Stage One covers only a third of Frontier's freehold landholdings, and the Company can potentially export multiples of Stage One of renewable electricity by virtue of accessing the two connections to the Landwehr Terminal. Frontier also continues to explore downstream opportunities including green hydrogen.



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## 1. Background and Location

The Waroona Renewable Energy Project is located 120km south of Perth in the Shire of Waroona, in Western Australia. The Project's location provides the Company with several strategic advantages for developing a renewable energy project including:

- Mediterranean climate, characterised by warm to hot, dry summers and mild, wet winters. Year-round solar radiation that is well suited for solar energy generation.
- Freehold land holding of 868ha on flat, largely cleared agricultural land where native title has been extinguished. The Stage One development sits on 303ha and comprises of largely cleared farming land, currently used for grazing, with small patches of native vegetation.
- Skilled workforce in several regional population centres located within 60km of the Project site, including Waroona, Collie, Mandurah and Bunbury.



**Figure 3: Waroona Renewable Energy Project Footprint**

Stage One of the Project comprises 120MWdc photovoltaic (**PV**) solar energy production with an integrated battery energy storage system (**BESS**) comprising an 80MW 4-hour battery. Both are fed into a 33kV/330kV Substation on site, which in turn is connected to the existing Western Power Landwehr Terminal substation via a 330kV single circuit transmission line.

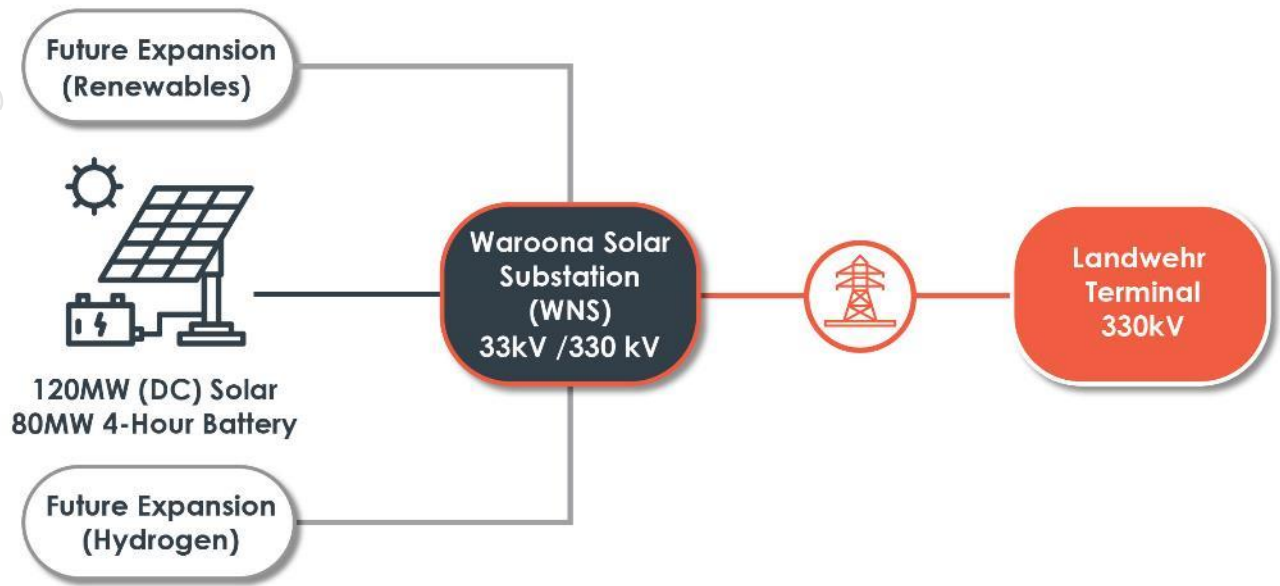


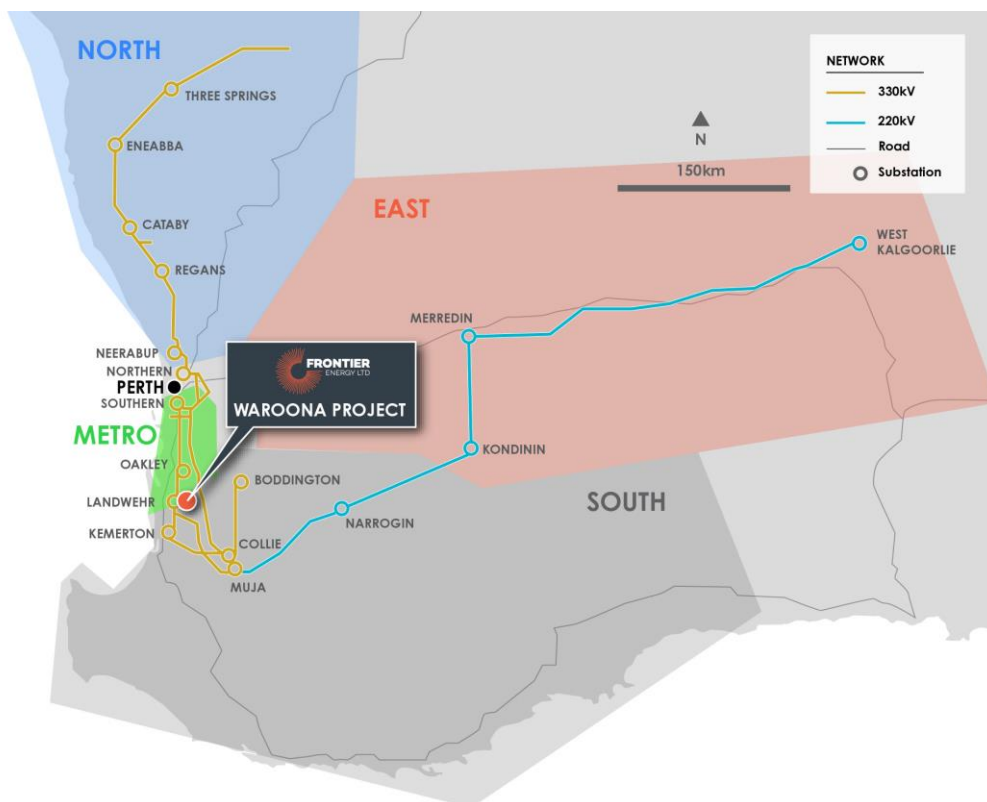
Figure 4: Project Schematic

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## 2. SWIS - Grid Connection

A key strategic advantage is the Project's proximity to the Landwehr Terminal, a major connection point into the SWIS – WA's main electricity network. The Landwehr Terminal is within 0.5km of the Project providing the Company access to one of the least constrained portions of the transmission network between Collie, the current coal-fired power producing centre, and the Perth metropolitan area, with large industrial consumers including at Oakley, Kemerton, Boddington and Southern Perth nearby (See Figure 5).



**Figure 5: SWIS 330kV and 220kV networks**

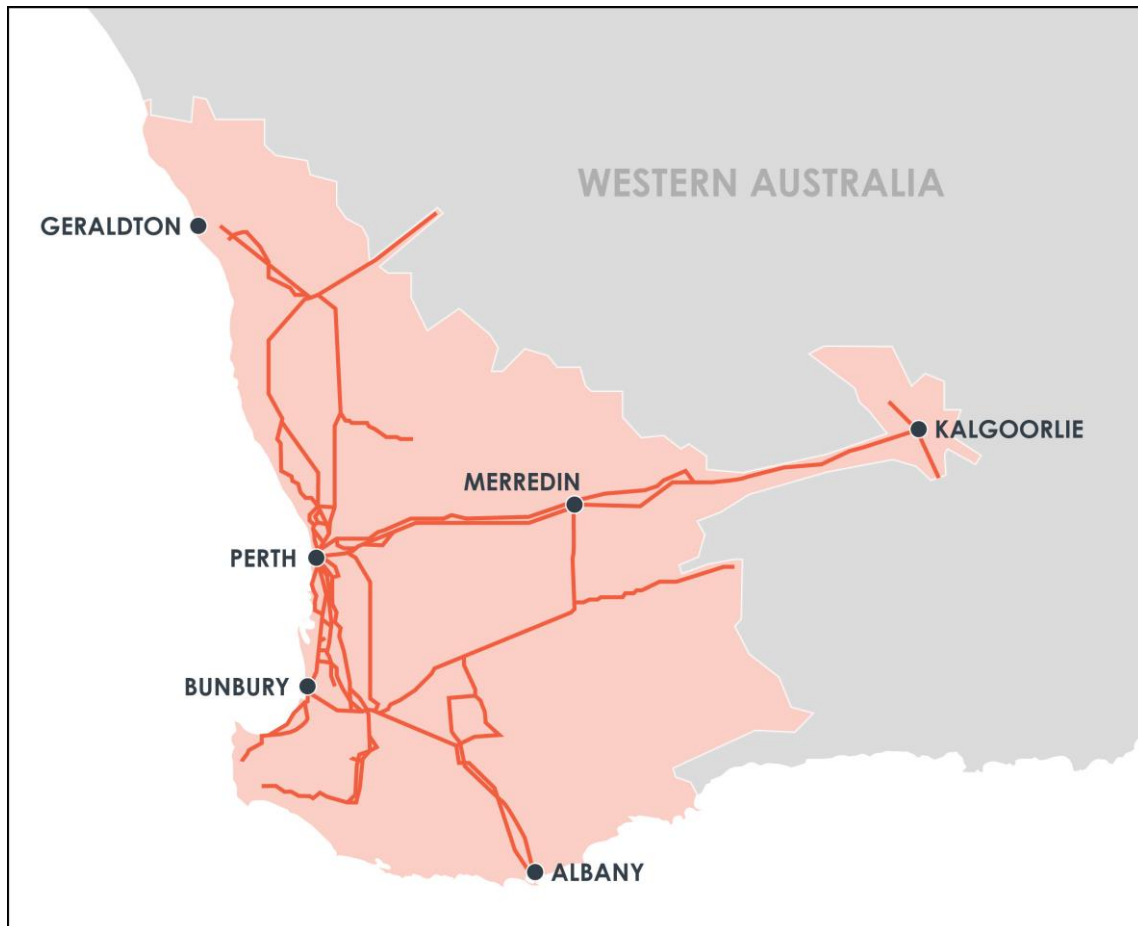
There are only limited opportunities on the SWIS for the development of a connected generator of the Project's scale in the short or medium term. Until 2030, in the entire SWIS, the adjacent Landwehr Terminal is one of few locations on the SWIS that can readily accommodate new large scale renewable connections of 250 MW or greater.

### Overview of the SWIS and the WEM

The SWIS is the main electricity network in WA and serves ~1.2 million customers in the South West of WA, covering 260,000km<sup>2</sup> from north of Geraldton in the Mid West to Albany in the south and Kalgoorlie in the east, with a total of ~7,750km of transmission lines and 72 registered generation facilities trading > 17TWh per year<sup>6</sup>.

<sup>6</sup> <https://aemo.com.au/-/media/files/electricity/wem/wholesale-electricity-market-fact-sheet.pdf>

The SWIS is physically separate from the National Electricity Market (NEM) in the eastern states of Australia (New South Wales, Queensland, South Australia, Victoria and Tasmania) and roughly a tenth of the size of the NEM.



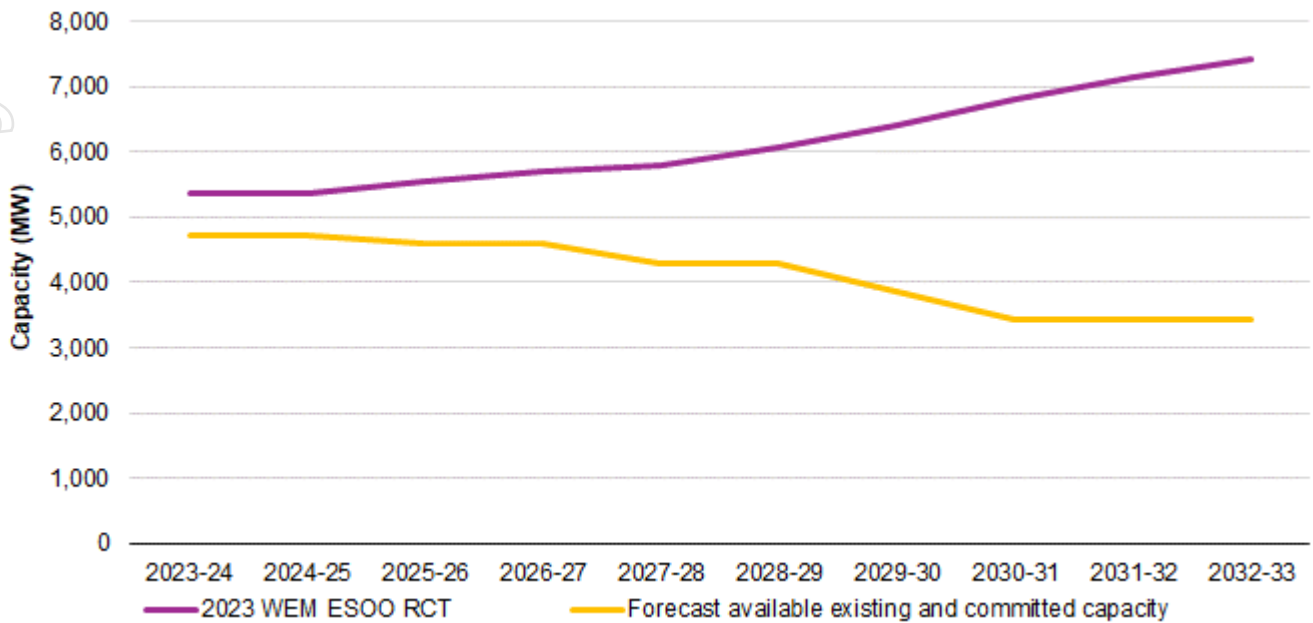
**Figure 6: WA’s main electricity network, SWIS**

The WEM comprises markets for energy and for capacity on the SWIS and is operated by the Australian Energy Market Operator (**AEMO**).

**Forecast capacity gap**

According to AEMO, the WEM is in a position of increasing capacity deficits. AEMO's 2023 annual Electricity Statement of Opportunities<sup>7</sup> (**ESOO Report**) highlighted the urgency of advancing generation, storage, demand side management, and transmission projects to bolster reliability and support a rapid and orderly energy transition. Its findings emphasise the need for additional capacity procurement and expedited progress of capacity projects in the SWIS.

<sup>7</sup> [https://aemo.com.au/-/media/files/electricity/wem/planning\\_and\\_forecasting/esoo/2023/2023-wholesale-electricity-market-electricity-statement-of-opportunities-wem-esoo.pdf](https://aemo.com.au/-/media/files/electricity/wem/planning_and_forecasting/esoo/2023/2023-wholesale-electricity-market-electricity-statement-of-opportunities-wem-esoo.pdf)



**Figure 7: 2023 WEM ESOO Reserve Capacity Target (RCT) and forecast capacity, illustrating the Gap**

Whilst there are multiple factors highlighted in the ESOO Report affecting both supply and demand, the key drivers were:

- Increased business, industrial and electrification (Demand)** – Forecast demand has increased significantly due to growth in business electrification, along with growth in cooling load (air-conditioning), electric vehicles, and the expansion of industrial loads. Operational consumption is forecast to grow at an average annual rate of 5.6% and reach 30.3TWh per annum in 2032-33, a 72% increase compared to the 2022/23 estimate.
- Renewable Energy Transition (Supply)** – the transition to renewable energy has been accelerated significantly over the past 12 months. In September 2022 the Australian Federal Government legislated to lower emissions by 43% by 2030 and achieve net zero emissions by 2050<sup>8</sup>. In WA, the State Government targets are to reduce government emissions by 80% below the 2020 level by 2030, and to meet net zero by 2050<sup>9</sup>. This has seen the State Government announce the closure of coal fired power generation in WA by 2029. These factors have significantly accelerated the forecast reduction in supply compared to the 2022 WEM ESOO.

In the ESOO Report, AEMO identifies ~2.1GW probable capacity additions by 2030 (of which ~1.1GW is battery storage).

<sup>8</sup> <https://www.pm.gov.au/media/australia-legislates-emissions-reduction-targets>

<sup>9</sup> <https://www.wa.gov.au/service/environment/business-and-community-assistance/government-emissions-interim-target>



### Connection Agreements

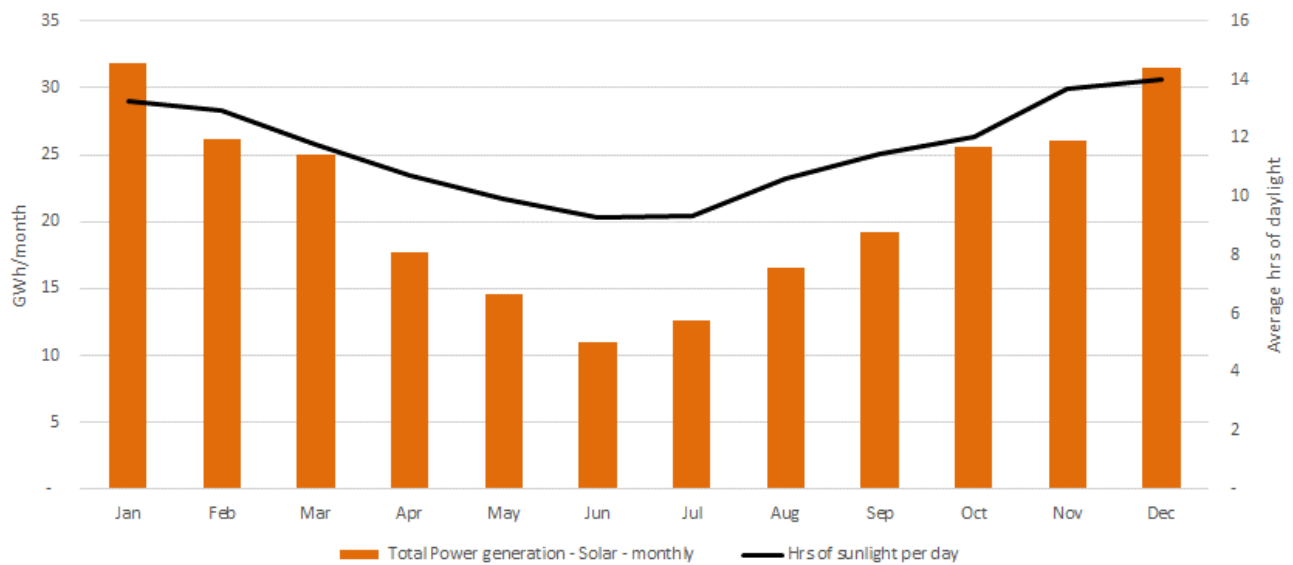
The Company has a network connection access offer in the form of an Electricity Transfer Access Contract (**ETAC**) and Interconnection Works Contract (**IWC**) with Western Power, the WA Government utility, in place. These agreements provide for Western Power to carry out the necessary work to connect the Project to the network (the SWIS) and then for the Project's ongoing connection to the network for the power it generates, respectively. The ETAC is the standard access contract that Western Power proposes and works within WEM framework.

An updated access application incorporating the necessary changes for the latest DFS design has been submitted to Western Power for assessment. The Company does not foresee impediments to approval of the updates.

### 3. Solar Farm and BESS

The 120MWdc Waroona Solar Farm with BESS is a large-scale solar power generation facility designed to harness solar energy efficiently, and store and discharge energy at peak demand intervals. The BESS also has the capability of providing certain network stability related services.

The 120MWdc solar farm with 25 inverters and six DC-coupled battery units per inverter represents a state-of-the-art renewable energy facility that will produce an estimated 258 GWh/year of solar energy.



**Figure 8: Solar energy generation by month, year one**

The main components of the solar facility are:

**Solar Panels:** The solar farm consists of 198,504 bifacial ~605W solar panels. The solar panels convert sunlight into direct current (DC) electricity through the photovoltaic effect.

**Tracker system:** The tracker system consists of a robust mechanical structure that supports the solar panels. This structure typically includes a framework, mounting brackets, bearings, and motors. Single axis trackers will be used that rotate the solar panels along the north-south axis, to follow the sun's path from east to west. The tracker system is controlled by a sophisticated control system that determines the position of the sun based on time, date, and geographical location, optimising the tracking algorithm of each individual row.

**Inverters:** Inverters are devices that convert the DC electricity generated by the solar panels into alternating current (AC) electricity, compatible with the electricity network. There are 25 inverters, with each inverter connected to ~ 8000 solar panels.

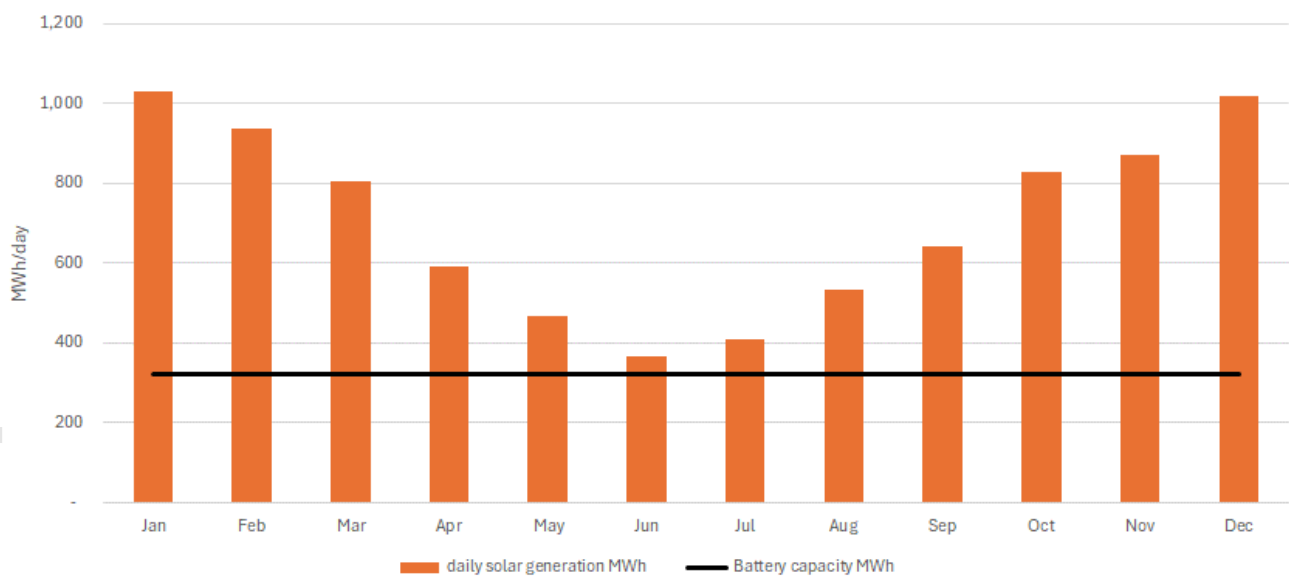
**DC-Coupled Battery Units:** Each inverter is paired with six DC-coupled battery units via six DC-DC converters. Solar panels generate electricity in the form of direct current at varying voltages, depending on factors such as sunlight intensity and temperature, which fluctuate



throughout the day. However, batteries require a specific voltage to charge efficiently. The DC to DC converters regulate the voltage from the solar panels to provide a stable voltage input and control the direction of flow. DC-coupled battery systems integrated with the solar array allow storage of solar energy directly from the solar panels before it is converted to AC by the inverters.

**BESS:** The battery units store solar energy generated during periods of high sunlight and can discharge stored energy during periods of low solar irradiance or high energy demand. They also provide grid stability, peak shaving, and ancillary services to the electricity network. There are 6 battery units (and 6 DC-DC converters) per inverter, disseminated throughout the solar farm. The total BESS capacity is nominally 80 MW / 320 MWh i.e. the battery is capable of storing and discharging 80MW for 4 hours. The actual installed capacity is around 375 MWh, however, battery performance degrades over time, as explained in Section 4.

This size battery can be fully charged from the 120MWdc solar farm throughout the year, including during winter months, when solar power generation is at its lowest. In addition, the 80MW/320 MWh battery can be added to the existing solar design without the need to add additional inverters (thereby minimising rework and effect on grid access approvals).



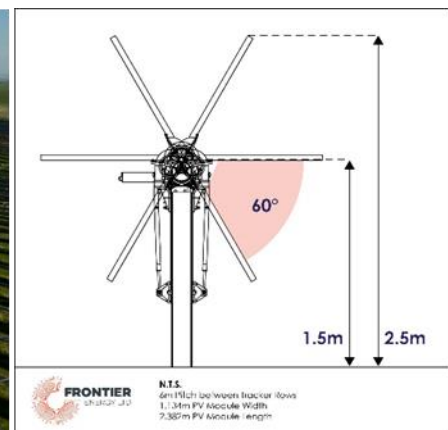
**Figure 9: Battery capacity vs average solar generation, year one**

The battery is in a DC coupled configuration, which results in the lowest possible energy loss between charging and discharging cycles.

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**Figure 10: Waroona Solar Farm Stage One layout**



**Figure 11: Typical solar farm arrangement with tracker**



**33kV Switch room:** The switch room serves as a central hub for the solar farm and contains switchgear rated at 33 kilovolts (kV) to handle the high voltage output from the 25 inverters. The switchgear includes circuit breakers, disconnect switches, and other protective devices to control the flow of electricity and ensure safe operation of the system. When combined with isolation devices available at the inverter and within the solar panel clusters, it is possible to isolate any one of the 25 inverters, associated BESS and groups of solar panels for maintenance while the remainder are operational. From the 33kV switch room the energy is fed through a 33kV/330kV transformer to the 330kV switchyard.

**Waroona Solar Sub-station (330kV Switchyard):** A 330kV switchyard with a "breaker and a half" design is an efficient and highly secure arrangement commonly used in high-voltage electrical substations for power transmission. The switchyard is equipped with sophisticated control and protection systems that monitor the electrical parameters of the system and initiate protective actions in response to abnormal conditions. The "breaker and a half" design is a configuration used for the circuit breakers within the switchyard. This design allows future expansion without any downtime for existing facilities.



**Figure 12: Switchyard**

**Environmental Considerations:** The solar farm is designed with environmental sustainability in mind, utilising clean and renewable solar energy to generate electricity without producing greenhouse gas emissions or air pollutants. Environmental impact assessments have been conducted to minimize the ecological footprint of the solar farm and mitigate potential environmental impacts. Incite Energy, using PVsyst Photovoltaic Software, estimate that the facility will save 5,427,951 tonnes of CO<sub>2</sub> as compared with the International Energy Agency typical grid lifecycle emissions for Australia.

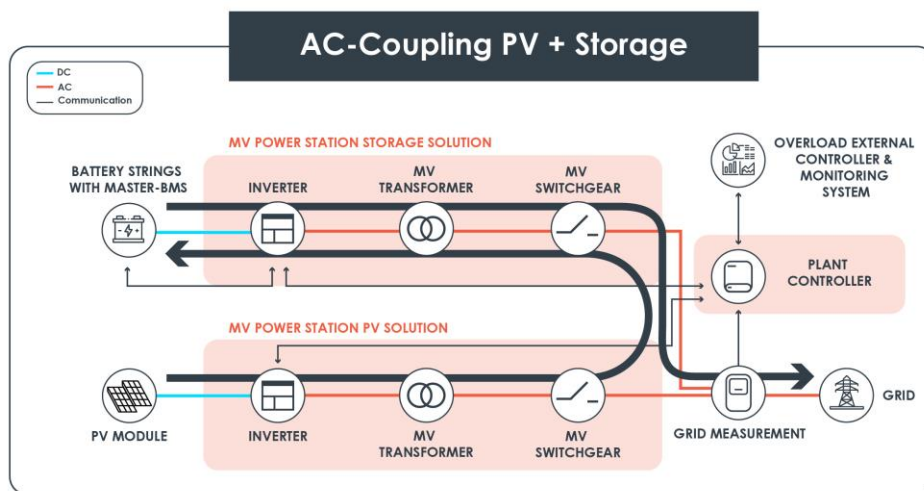


## 4. Details on Battery Integration

In late 2023, Energy Policy WA announced that the reference technology to be used for future Benchmark Reserve Capacity Price (**BRCP**) would be a 4-hour Lithium-ion battery. Following this, the Company evaluated the approach for integrating a battery. After reviewing the preliminary results of this work, compared to a range of alternative strategies, Frontier concluded that the optimal strategy for a Stage One development consists of a 120MW solar facility and an 80MW/320 MWh battery, i.e. the battery is capable of storing and discharging 80MW for 4 hours.

### Rationale for selecting DC coupled BESS over AC coupled BESS

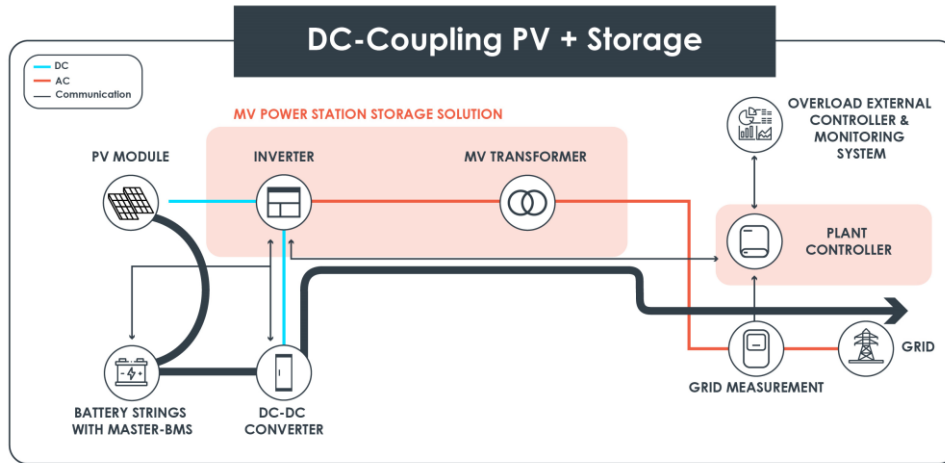
In an AC coupled system, the battery is connected to the alternating current (AC) side of the electrical system. AC coupling allows for greater flexibility because the battery system is not directly tied to the direct current (DC) output of the renewable energy source, such as solar panels. AC coupled systems typically use inverters to convert the DC electricity generated by solar panels into AC electricity before it enters the battery system. This type of system can be easier to retrofit into existing solar installations or grid connections since it does not require changes to the existing DC infrastructure.



**Figure 13: AC Coupling PV plus storage**

In a DC coupled system, the battery is connected directly to the DC side of the renewable energy source, such as solar panels. DC coupling eliminates the need for an additional inverter to convert DC to AC since the battery system operates directly with the DC electricity generated by the renewable source. DC coupled systems can be more efficient since they bypass the conversion losses associated with DC to AC inversion and vice versa. These systems

are often integrated into new renewable energy installations where the design can optimize the direct connection between the renewable source and the battery system.



**Figure 14: DC Coupling PV plus storage**

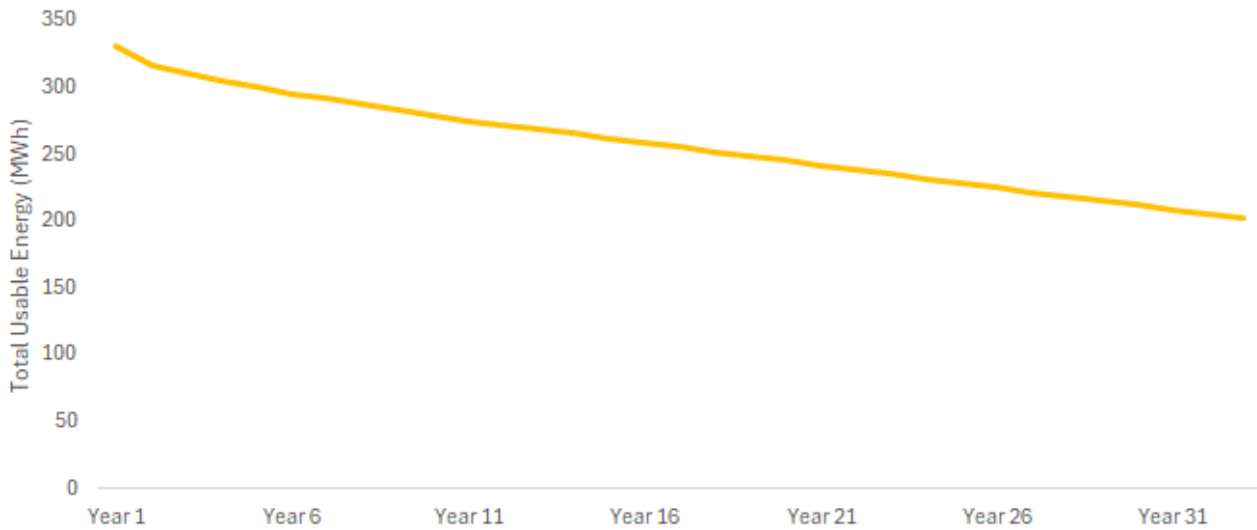
The energy loss in a DC-coupled battery is 15%, which takes into account battery efficiency, battery auxiliary power consumption, cabling losses, DC-DC converter losses. This 15% loss also includes inverter, distribution and transmission losses which are losses that would be incurred anyway for solar only generation. The effective energy loss for the battery system alone is 11% if no inverter, distribution and transmission losses are included.

A DC coupled battery integrated in the solar facility, sharing the solar inverters, will have a lower capital cost and will also provide a greater efficiency compared to an AC coupled, separate BESS facility. This strategy provides the strongest potential financial returns with the lowest risk.

### **Battery degradation**

Lithium Iron (Fe) Phosphate (LFP) batteries have been selected for the Project as they are proven technology with superior safety, long cycle life, high energy density, fast charging capabilities, wide operating temperature range, and environmental friendliness as compared to other battery technologies.

Utility-scale LFP batteries experience capacity degradation over time due to factors like calendar aging, cycle aging, temperature, state of charge management, manufacturing quality, and usage patterns. These factors contribute to a gradual reduction in the battery's capacity and performance over its lifespan. A degradation curve assumed in the DFS is based on the offer received from the likely battery supplier and is presented below, showing a degradation of ~16% over the initial 10 years and ~26% over the first 20 years of battery life.



**Figure 15: Battery degradation curve<sup>10</sup>**

There is the possibility to supplement the battery capacity (likely between years 10 and 20) to bring it back to the starting condition and thereby increase revenues in later years. Given the fast pace at which battery technology is evolving it is difficult to predict the method that will be used, and the costs involved. The Company anticipates evaluating the potential economic benefits and implementing some battery capacity augmentation in future when it makes financial sense to do so. This has not been included in the financial analysis but offers potential upside. The batteries will carry 20-year warranties on degradation.

<sup>10</sup> Source: SpringCity

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## 5. Project Approvals and Heritage Survey

A summary of the Project's approval status is provided in **Error! Reference source not found..**

Approval	Status
<b>Environmental Protection Biodiversity Conservation Act 1999</b>	
Referral of a Proposed Action – Solar farm	Completed - Level of Assessment – Not a Controlled Action.
<b>Environmental Protection Act 1986</b>	
Native Vegetation Clearing Permit for the solar farm	Granted – Clearing Permit CPS 8758/1.
Native Vegetation Clearing Permit for the transmission line to connect the Project with the Landwehr Power Terminal	Granted – Clearing Permit CPS 9351/1.
<b>Planning and Development Act 2005</b>	
Waroona Solar Farm Planning Application	Granted – DAP Application TP2115 Determination (Dap/19/01667) for Construction and operation of a 165 MW Solar Farm. Note - The capacity of the proposed solar farm is not limited by the title of the development approval (i.e. 165 MW). Amendment needed for changes to battery and revised layout
Application for the Transmission Corridor	Granted – DAP Application -TP2115 Determination Amendment – Transmission Corridor.
Application for an Extension of the Approval Period	Granted - DAP Application -TP2115 Determination Amendment – Extension of the Approval Period.
Waroona Solar Farm Planning Application amendment	To be submitted prior to construction.
<b>Land Administration Act 1997 (LAA)</b>	
Application to Close a Public Road	The Company has commenced discussions with the Shire of Waroona to close the Road Reserve (Land ID no – 3629759, 3629760) on Lot 25 (981) Buller Road.

**Table 5: Project approvals status**

A desktop review for registered Aboriginal heritage sites was undertaken by AECOM (2019d) as a part of the Development Application process. According to the Aboriginal Heritage Inquiry System (AHIS), there are no records of any Registered Aboriginal Heritage Sites or other Heritage Places within the Project area.



The Company has commenced engagement with the Gnaala Karla Booja Aboriginal Corporation (GKB) and the Waroona Aboriginal and Torres Strait Islander Corporation (WAASTIC) as a part of its stakeholder engagement program.

To confirm if there are any heritage matters within the project area, the Company is planning a site visit with the GKB and WAASTIC in early 2024. Based on current discussions it is understood that the only area of heritage is the Harvey River Main Drain which is outside of the Project footprint and will not be impacted by the Project.

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## 6. Capital Costs

The Project capital cost estimate developed for the Study is based upon engineering, quantity take-offs, budget price quotations for major equipment and bulk commodities. Unit rates for installation were based on market enquiries specific to the Project and benchmarked to those achieved recently on similar projects in which Incite Energy were involved. The estimate is quoted to a level of accuracy of -15%/+15%.

A summary of the capital cost estimate, including contingency, is set out in in **Error! Reference s** **ource not found.** below.

Capital Item	A\$m (2024 real)
Solar modules (incl freight and traceability)	\$32.3
Tracker system	\$14.8
Inverters	\$13.6
BESS	\$118.5
Waroona Solar (WNS) Substation	\$21.4
Network connection (Western Power)	\$8.5
Solar farm construction / commissioning	\$56.1
Owner's costs (incl operational readiness and pre-production costs)	\$7.7
Transport / logistics (port costs and Fremantle to site)	\$2.3
Technical advisor	\$1.2
Sub Total	\$276.4
Contingency (10%)	\$27.6
<b>Total Project Cost</b>	<b>\$304.0</b>

**Table 6: Capital cost breakdown**

The estimate is expressed in Australian dollars based on the exchange rate of 0.65 AUD/USD. There are four major contracts that are subject to the exchange rate fluctuation, being the supply of solar panels, tracking systems, Inverters and BESS. Current market pricing for equipment, labour and bulk rates are incorporated into the estimate. The installation rates include all charges necessary to deliver the requirements of the Project.

## 7. Operating Costs

Project operating costs have been developed using a range of sources. Costs are presented in Australian Dollars (AUD) and are based on prices received during the 4th quarter of 2023. The cost estimates are considered to have an accuracy of  $\pm 15\%$ .

Administration operating costs have been determined to reflect the Project location, scale of operation and accepted requirements in Western Australia. All of the operating costs are fixed costs, there is no variable cost component that is affected by the availability of the facility or the amount of energy generated.

Unit Cost	A\$ m pa (2024 real)
Operations - maintenance & cleaning	\$1.9
Insurance	\$1.7
Labour costs	\$0.6
Market participation fees	\$0.4
Operations - monitoring & control system	\$0.3
Market settlement costs & other	\$0.2
<b>Total operating costs per year</b>	<b>\$5.0</b>

**Table 7: Operating cost breakdown**

The operating cost estimate excludes provision for exchange rate variations, project financing costs, interest charges, contingency, corporate overheads, GST and ongoing recruitment costs.

## 8. Revenue - Wholesale Electricity Market

The Project will deliver electricity into the WEM, providing the revenue generation through four separate revenue streams:

- 1) Reserve Capacity Payments;
- 2) Electricity sales;
  - a. peak period (energy from battery between 5pm and 9pm); and
  - b. day-time sales (energy direct from solar);
- 3) Frequency Control Ancillary Services (FCAS); and
- 4) Large-Scale Generation Certificates (LGC).

### Forecast Scenarios

Aurora Energy Research (**Aurora**), a global energy market expert, was engaged to provide independent forecasts for each of these markets over the life of the operation. These forecasts are reflected in the 'Base Case' and 'Stress Test' scenarios.

Aurora models the WEM in an integrated fashion, modelling in detail demand drivers including industrial electrification and adoption of EVs, supply drivers including new renewables generation, battery capacity installations (both behind-the-meter and utility scale BESS), the decommissioning of coal fired generation, and cost drivers such as domestic gas and capital to install new capacity.

In its forecasts, Aurora takes a more conservative view on demand than AEMO, as shown in Figure 16 – Aurora's demand forecast is in line with AEMO's lower case in the period 2024-2028 and falls below even this lower case from 2029-2033.

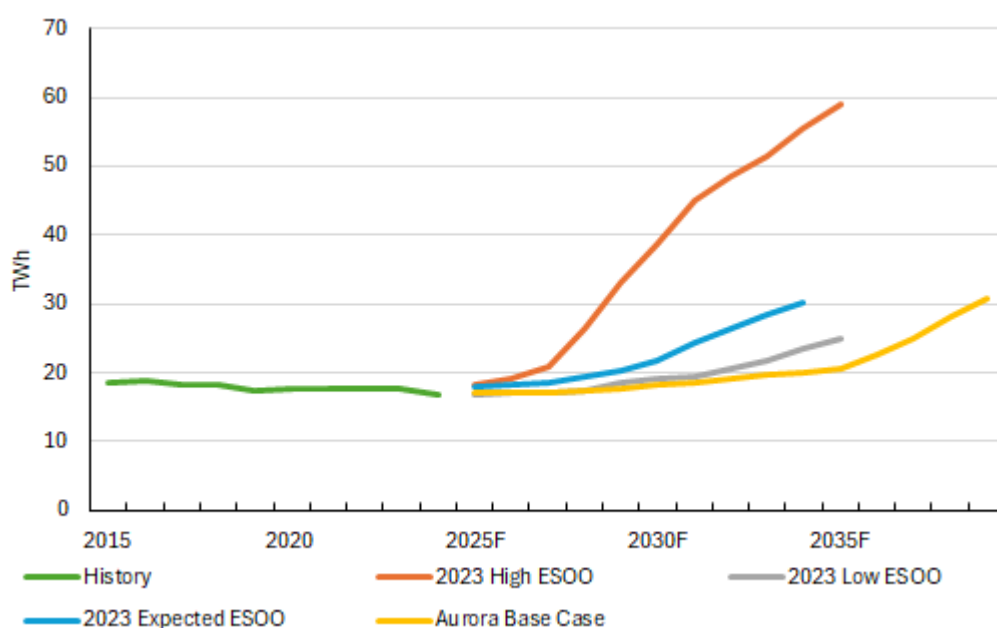


Figure 16: WEM Electricity demand forecast scenarios

The supply response differentiates Aurora's Base Case from Stress Test scenarios.

The Base Case scenario has coal fired plant closures as announced by the Government, as well as a retirement of the Bluewaters coal fired power station by 2029. Additional transmission lines are built as outlined in the Government's SWIS Demand Assessment<sup>11</sup>, and renewable capacity is added with a one-year delay to account for construction and grid connection timeline risk.

In the Stress Test scenario, there is no delay in renewable capacity additions and Bluewaters remains operating until 2031.

Aurora generated price forecasts specific to the Project's location in the SWIS, the Project's size and the 4-hour discharge capacity of the battery.

### Reserve Capacity Payments

The Reserve Capacity Mechanism (**RCM**) in the WEM is designed to ensure that there is adequate generation capacity available to meet forecast peak electricity demand. The RCM is unique to Western Australia and not available in other Australian states.

Under the RCM, electricity generation plants are certified and allocated capacity credits based on the size of the facility capacity. Electricity retailers are required to procure capacity credits in proportion to their share of the electricity load in the twelve Peak SWIS Trading Intervals<sup>12</sup>. The retailers may meet this obligation by either purchasing capacity credits directly from generators under bilateral contracts or procuring capacity credits via AEMO at an administered price (known as the Reserve Capacity Price).

A BRCP is set each year by the Economic Regulation Authority, with reference to the cost of adding generation capacity, to inform the RCPs received by generators. New generators are able to lock in the initial RCP, escalated by CPI, for five years.

BRP is locked in two years in advance of the energy generation period. The BRCP has increased over the past number of years (Figure 17), with the latest BRCP increasing to \$230,000 per MW for the 2026/27 year<sup>13</sup>. When the market is forecast to be in deficit, an additional 30% premium is applied to this price. This occurred in the past year for the forecast 2025/26 year.

In late 2023, the Government has also determined a 200MW / 800MWh lithium-ion 4-hour BESS, with a 330kV connection, to be the future benchmark technology<sup>14</sup>. This could also result in further increases in future BRCPs because battery technology is more expensive to install than the current reference technology, an open-cycle gas turbine.

<sup>11</sup> [https://www.wa.gov.au/system/files/2023-05/swisda\\_report.pdf](https://www.wa.gov.au/system/files/2023-05/swisda_report.pdf)

<sup>12</sup> <https://www.aemo.com.au/energy-systems/electricity/wholesale-electricity-market-wem/wa-reserve-capacity-mechanism/certification-of-reserve-capacity>

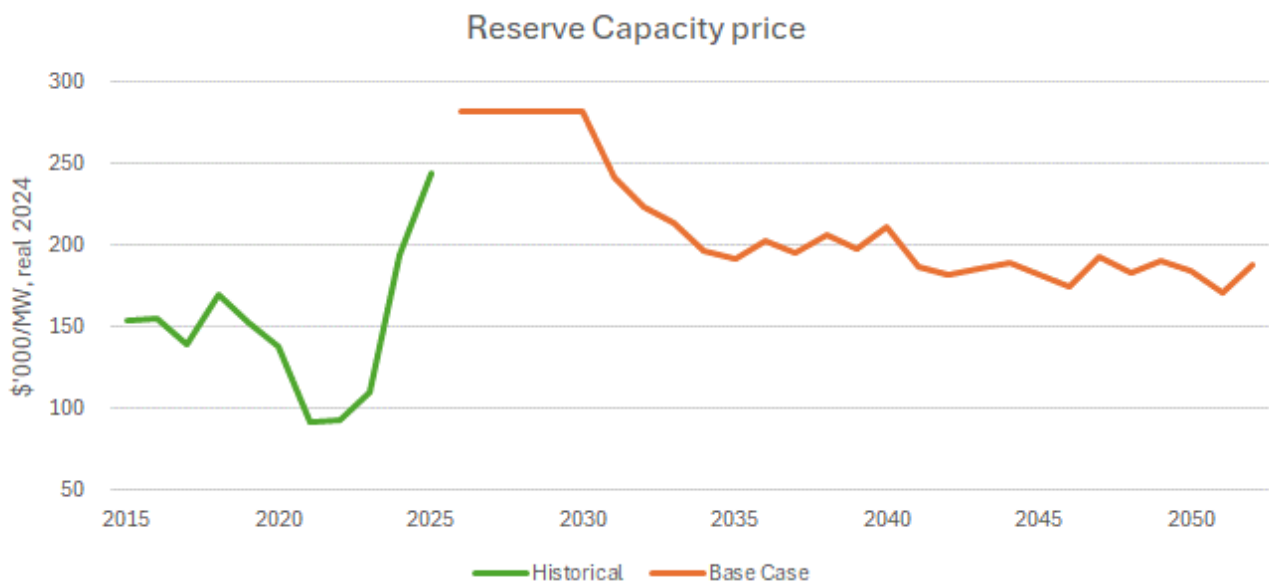
<sup>13</sup> <https://www.erawa.com.au/cproot/23833/2/2024-benchmark-reserve-capacity-price-for-the-202627-capacity-year.PDF>

<sup>14</sup> <https://www.wa.gov.au/media/43698/download?inline>

The WA Government announced a package of WEM reform initiatives<sup>15</sup> aimed at enhancing investment certainty for renewable and storage proponents in the SWIS. Reforms under consideration include:

- Lengthening the period of RCP guarantee from five years to 10 years;
- Increasing the BRCP premium during a deficit market from 30% potentially up to 80%, depending on the size of the deficit; and
- Introducing emissions thresholds of maximum 0.55t CO<sub>2</sub>e / MWh, disincentivising new gas fired generation capacity.

The graph below highlights the historical actual price for RCP, the 2026/27 price that can be locked in for five years, as well as the forecast beyond 2031.



**Figure 17: Historical and forecast RCP<sup>16</sup>**

### Electricity Sales

Electricity prices have increased by ~80% over the past two years, from A\$50/MWh in 2021 to A\$87/MWh in 2023<sup>17</sup>, reflecting the tight supply/demand dynamics outlined in the ESOO Report.

Prices vary significantly during the day due to supply and demand dynamics. In WA, the cause for large intraday fluctuation is arguably due to the State's high installation rates of rooftop

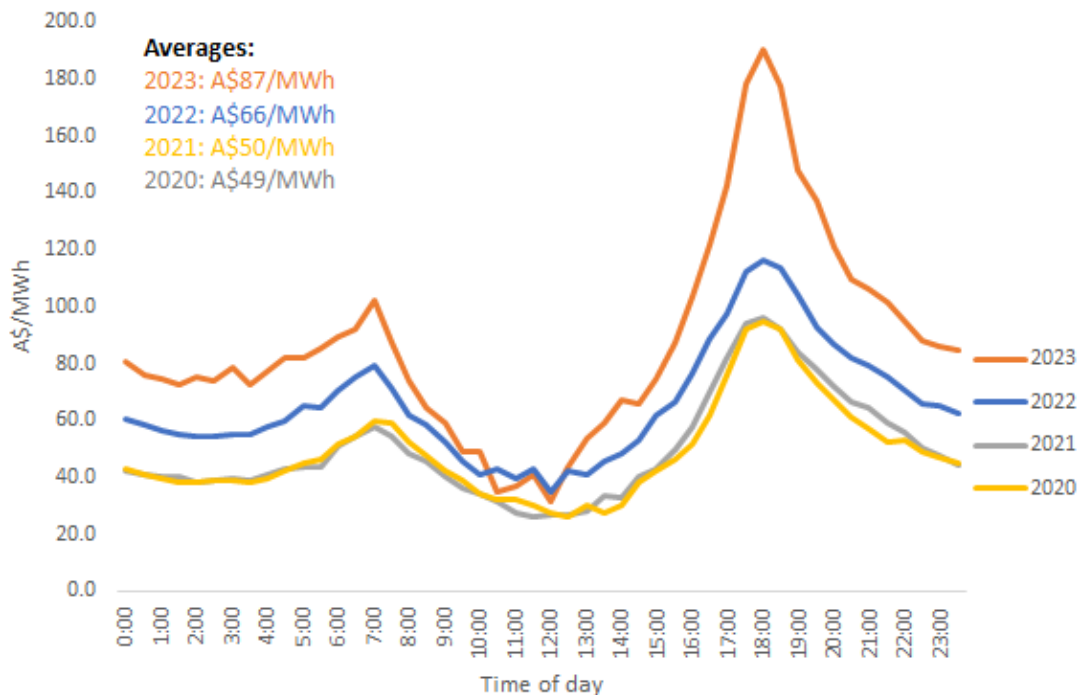
<sup>15</sup> [https://www.wa.gov.au/system/files/2023-08/reserve\\_capacity\\_mechanism\\_review\\_-\\_information\\_paper\\_stage\\_2.pdf](https://www.wa.gov.au/system/files/2023-08/reserve_capacity_mechanism_review_-_information_paper_stage_2.pdf).

<sup>16</sup> 2024 real dollar forecasts use RBA's February 2024 inflation forecast <https://www.rba.gov.au/publications/smp/2024/feb/outlook.html#table31>  
Historical prices are converted to 2024 real terms using the RBA's historical CPI series <https://www.rba.gov.au/statistics/tables/xls/g01hist.xls>

<sup>17</sup> Source: AEMO. No adjustment for curtailment has been applied when averaging.



solar (PV) at 38%<sup>18</sup>, one of the highest in the world. Prices dip during the morning, when solar generation peaks. In the afternoon, demand increases while solar generation declines, causing price to rise sharply and peak in the early evening.



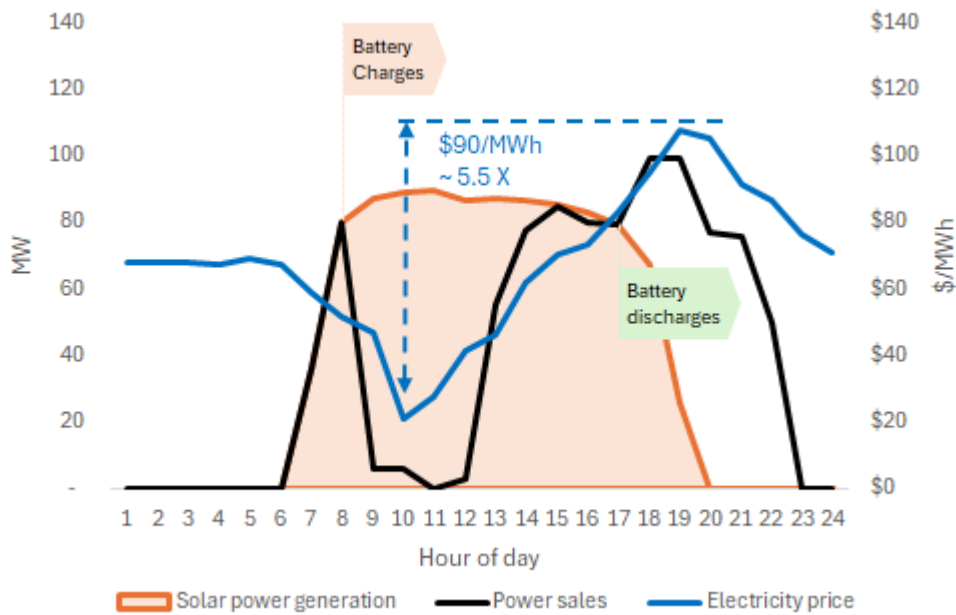
**Figure 18: Historical energy price in WA – 2020 to 2023, half hourly**

The integrated solar and battery 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 19.

<sup>18</sup> [https://aemo.com.au/-/media/files/electricity/wem/planning\\_and\\_forecasting/esoo/2023/2023-wholesale-electricity-market-electricity-statement-of-opportunities-wem-esoo.pdf?la=en](https://aemo.com.au/-/media/files/electricity/wem/planning_and_forecasting/esoo/2023/2023-wholesale-electricity-market-electricity-statement-of-opportunities-wem-esoo.pdf?la=en)

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**Figure 19: Integrated solar and battery enables price 'shifting'**

Table 8 below shows the average prices during peak (the interval from 16h00 to 21h00) and solar times (i.e. all times during the day when solar radiation is present). These are proxies for the price available to a solar farm and to a 4-hour battery. Average typical solar production energy prices have increased ~63% in the last two years to \$68/MWh in 2023, while peak energy trading interval prices have increased 81% to average ~\$143/MWh in 2023.

Year	Average 24 hours \$/kwh	Solar \$/kwh	Peak (4pm-9pm) \$/kwh
2020	48.9	41.7	75.1
2021	49.9	41.6	79.2
2022	65.9	57.0	97.1
2023	87.2	67.9	143.0
<b>Increase 2023 vs 2021</b>	<b>75%</b>	<b>63%</b>	<b>81%</b>

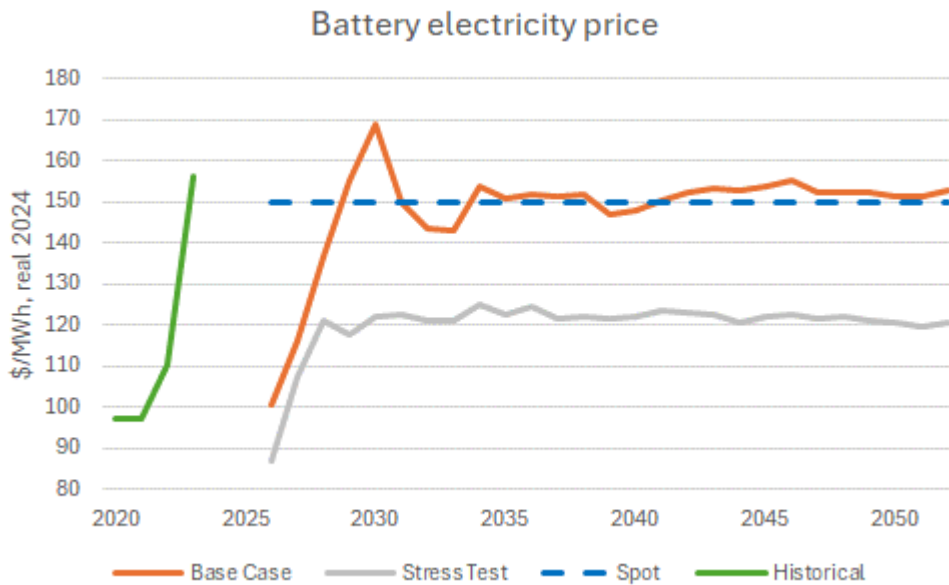
**Table 8: Historical WEM electricity prices<sup>19</sup>**

The revenue from electricity sales is modelled in two parts, one being the battery revenue and the second the solar revenue. These forecasts were developed by Aurora with specific reference to the Project's location in the grid, size of the solar farm and storage capacity of the battery. Figure 20 shows the battery price forecast and Figure 21 the solar price forecast.

Base Case battery price forecast is around \$150/MWh long term (similar to Spot) with \$120/MWh in the Stress Test scenario. Volatility in the early years is caused by the large impact of adding battery storage of >1GW by 2027 and rolling off ~1.3GW of coal fired capacity by 2029.

<sup>19</sup> Source: AEMO; straight averages of half hourly intervals, no cap or floor applied

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**Figure 20: Historical and forecast price - battery<sup>20</sup>**

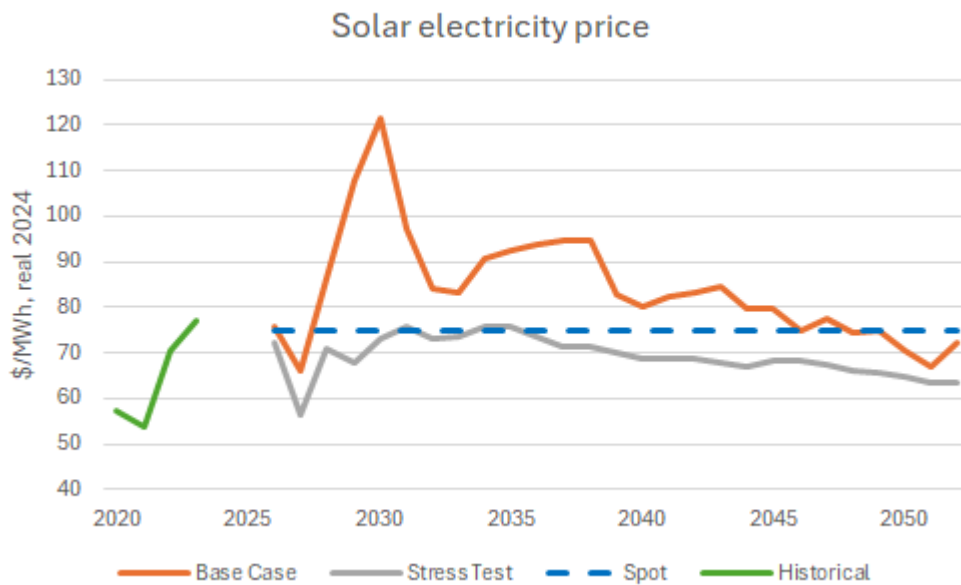
Solar price forecast applies only during those hours that the battery is not being charged, i.e. in the very early morning before charging commences, and in the late afternoon shoulder period once the battery has been charged and solar energy is again available to be dispatched to the grid.

As a result, the solar price applied to the Project is inflated because low price intervals are not included – during the low price intervals in the morning and mid-day, the battery is charged and no solar power is dispatched to the grid.

<sup>20</sup> 2024 real dollar forecasts use RBA's February 2024 inflation forecast <https://www.rba.gov.au/publications/smp/2024/feb/outlook.html#table31>  
 Historical prices are converted to 2024 real terms using the RBA's historical CPI series <https://www.rba.gov.au/statistics/tables/xls/g01hist.xls>



The Base Case and Stress Test scenarios are roughly above and below the Spot of \$75/MWh.



**Figure 21: Historical and forecast electricity price - solar<sup>21</sup>**

Curtailment is significantly reduced by having the battery in place to charge during the intervals when solar power would most likely be curtailed. As a result, Aurora models that solar curtailment reduces from >8% to <1%.

The Project is also expected to see robust Marginal Loss Factors (**MLFs**) over the forecast horizon, due to its well-connected surrounding network and adjacency to the industrial load. Generation MLFs are expected to remain highly robust over the forecast horizon, in the 0.984 – 0.993 range, as are load MLFs, in the range of 0.987 – 0.999.

Key factors that result in the Project's robust MLFs include:

- Being adjacent to the industry load centres, particularly the Wagerup alumina production facility, means the Project will make minimal contribution to the network loss
- The transmission lines connecting Waroona and industrial loads are at high voltage (330 kV)

The low density of solar farms around Waroona area means the Waroona Solar Farm usually generates at times of low network congestion.

### Essential Services Revenue

<sup>21</sup> 2024 real dollar forecasts use RBA's February 2024 inflation forecast <https://www.rba.gov.au/publications/smp/2024/feb/outlook.html#table31>  
 Historical prices are converted to 2024 real terms using the RBA's historical CPI series <https://www.rba.gov.au/statistics/tables/xls/g01hist.xls>

While energy is the primary commodity bought and sold in the WEM, other services are also required to maintain security and reliability of supply – for example, providing flexibility to ramp up or ramp down generation capacity quickly or frequency control.

These services have previously been referred to as Ancillary Services and, from 1 October 2023 when the new market commenced, have been referred to as Essential System Services (ESS).

Five Frequency Co-optimised ESS (FCESS) Markets (which replace the existing non-co-optimised LFAS market), including:

- Regulation Raise
- Regulation Lower
- Contingency Reserve Raise
- Contingency Reserve Lower, and
- Rate of Change of Frequency (RoCoF) Control Service.

Aurora assesses that the BESS will only participate in the Contingency Raise Service, and therefore receives a 57% factor (based on benchmarking similar BESS on the NEM).

Aurora has forecast an FCESS revenue stream of ~\$1.5 - \$3.5m in the Base Case, based on Aurora's estimates. In the Stress Test, no FCESS revenue has been included, a worst case.

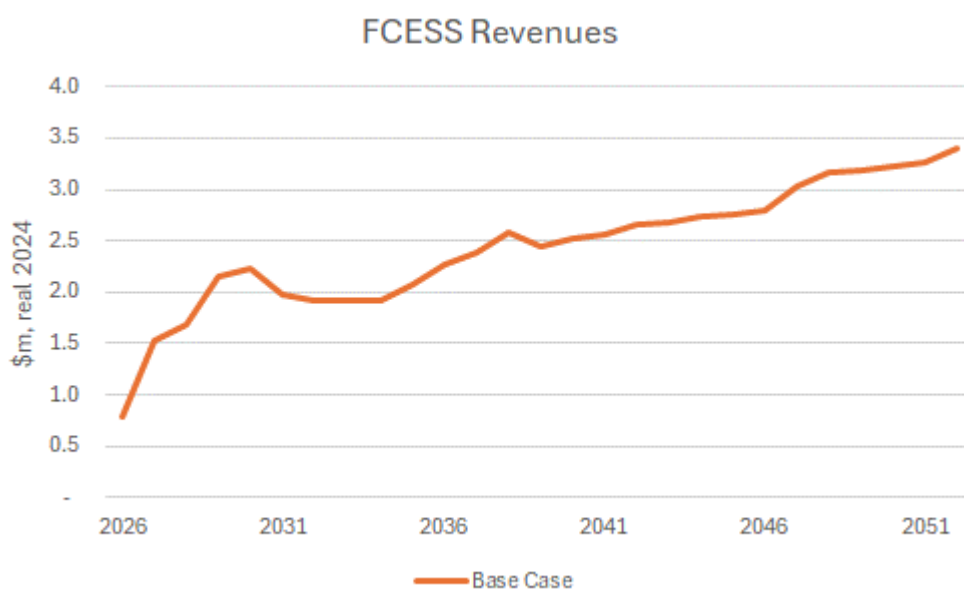


Figure 22: FCESS revenue forecasts<sup>22</sup>

### Large-Scale Generation Certificates (LGC)

Renewable energy producers in Australia with an accredited power plant may create LGCs. This is effectively a carbon credit that was created by the Australian Government to meet its initial Renewable Energy Target (**RET**). One LGC can be created per megawatt hour (MWh) of

<sup>22</sup> 2024 real dollar forecasts use RBA's February 2024 inflation forecast <https://www.rba.gov.au/publications/smp/2024/feb/outlook.html#table31>  
 Historical prices are converted to 2024 real terms using the RBA's historical CPI series <https://www.rba.gov.au/statistics/tables/xls/g01hist.xls>



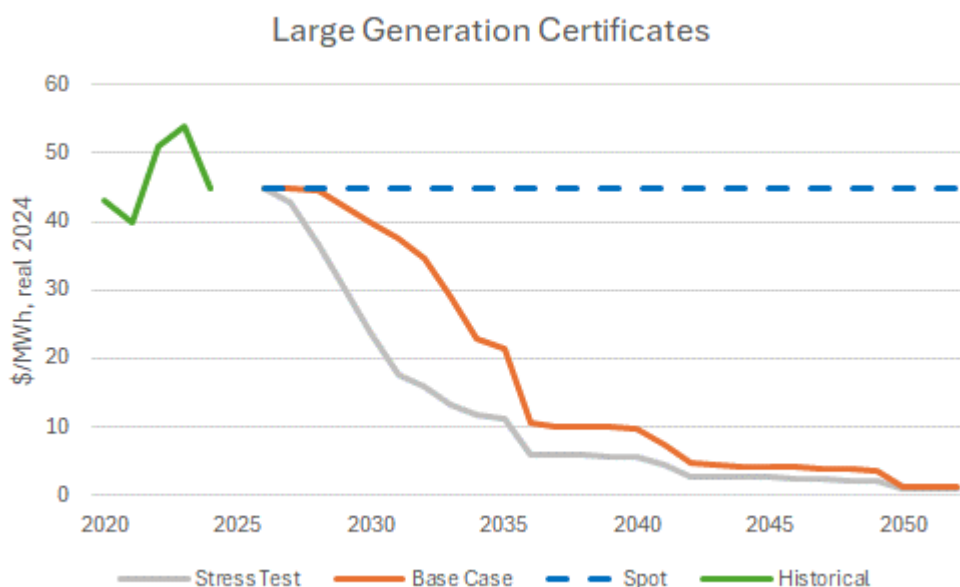
eligible electricity generated by a power station. The price of an LGC is currently around \$45/MWh, having ranged between \$40 and \$68 over the past three years.

The initial RET was met in 2019, and there is currently no legislated replacement for the RET. Despite this, LGC prices have remained strong on the back of voluntary demand.

It is likely that a form of Guarantee of Origin (REGO) certificate will be designed and implemented by the mid- 2020s.

The Stress Test forecasts a green value to persist by 2030, but to quickly decline as additional supply enters the market, and demand from current retailers/electricity consumers for green certificates may fall as the demand post-2030 is purely voluntary.

Potential for carbon fungibility with Australian Carbon Credit Units (**ACCUs**) could provide upside. Whilst the market futures for LGCs are downward sloping, futures for carbon prices are upward sloping due to the Government's Safeguard Mechanism, which requires Australia's largest greenhouse gas emitters to keep their net emissions below an emissions limit (a baseline). The government will gradually reduce emissions limits under the Safeguard Mechanism to help Australia reach net zero emissions by 2050. With a value of \$50 – 80/t on ACCUs, a carbon fungibility scheme would result in LGC prices of \$8 – 35 in the 2030s, and this informs the Base Case. The graph below highlights the historical actual price for LGCs (including CY24YTD) as well as each of the scenarios.



**Figure 23: Historical and forecast LGC prices<sup>23</sup>**

<sup>23</sup> 2024 real dollar forecasts use RBA's February 2024 inflation forecast <https://www.rba.gov.au/publications/smp/2024/feb/outlook.html#table31>  
 Historical prices are converted to 2024 real terms using the RBA's historical CPI series <https://www.rba.gov.au/statistics/tables/xls/g01hist.xls>

## 9. Financial Analysis

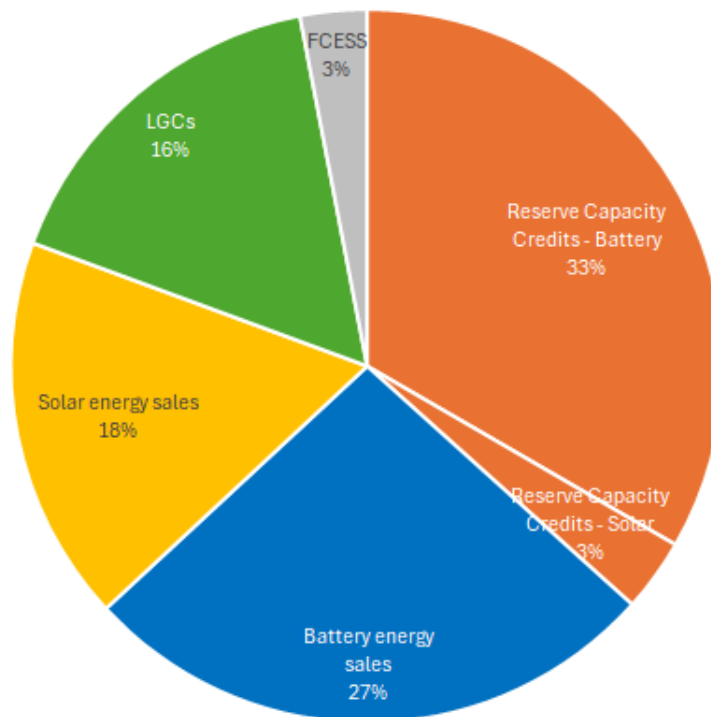
### Profitability

The Base Case assumptions result in robust revenue generation that is driven largely by secure, non-volatile revenue streams, and robust EBITDA margins of > 90%.

Revenues – Base Case		Year one	5-year Av.
Reserve Capacity Credits - battery	\$m	24.8	24.7
Reserve Capacity Credits - solar	\$m	2.3	2.4
Battery power	\$m	16.9	19.6
Solar power	\$m	8.9	12.9
LGCs	\$m	12.9	12.1
FCESS	\$m	1.7	2.2
<b>Total Revenue</b>	<b>\$m</b>	<b>67.7</b>	<b>74.0</b>

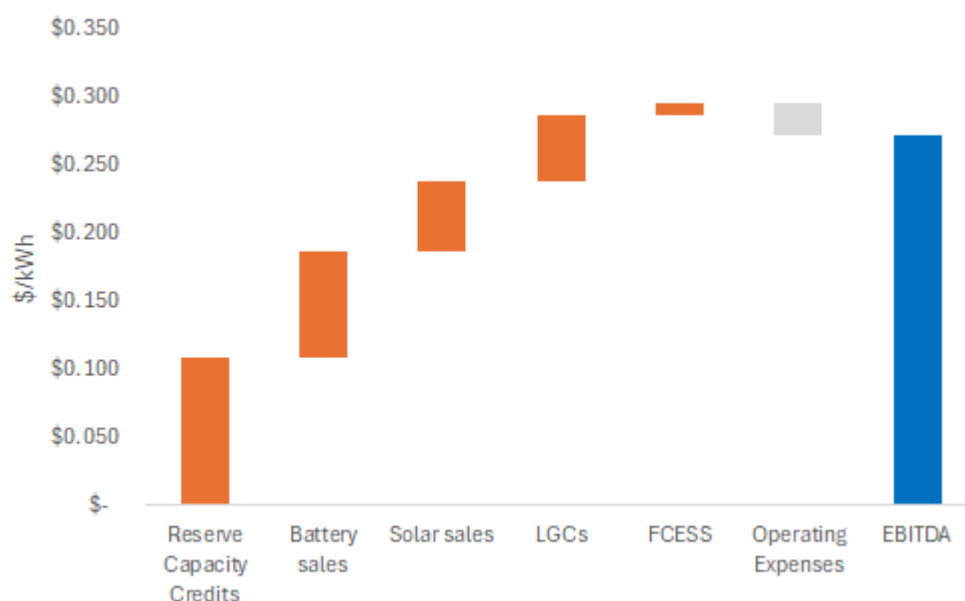
**Table 9: Project Revenue – Base Case**

The largest portion of revenue, 33%, is from battery Reserve Capacity Credits, a fixed revenue stream that can be locked in for five years.



**Chart 1: Project Revenue Split**

Operating costs are ~\$5m per annum (real) and this results in the Project generating annual EBITDA of \$68m in the first five years of operation, or ~27c/kWh. Figure 24 shows the key revenue and cost drivers on a \$/kWh basis.



**Figure 24: EBITDA waterfall**

EBITDA margins are > 90%.

P&L items – Base Case	Unit	Year one	5-year average
Revenues	\$m	67.7	74.0
Operating Costs	\$m	5.6	5.9
<b>EBITDA</b>	<b>\$m</b>	<b>62.1</b>	<b>68.1</b>
EBITDA Margin	%	92	92

**Table 10: Project EBITDA – Base Case**

### Returns on Capital

The strong profitability drives a payback period of 5.8 years and pre-tax unleveraged project IRR is 18.1% and post-tax IRR of 14.8%. Due to the large portion of revenue that is fixed, the Project has potential to carry approximately 70% gearing. At this level of the pre-tax IRR is 27.3% and post-tax IRR of 21.6%.

Project Cash flows	Unit	5-year average
EBITDA	\$m	68.1
Returns – Project ungeared	Unit	Number
Payback period	years	5.8
Pre-tax IRR	%	18.1
Post-tax IRR	%	14.8
Post-tax NPV <sub>7%</sub>	\$m	253
Target funding parameters <sup>1</sup>		
Gearing	%	70
Indicative return on equity <sup>2</sup>		
Pre-tax IRR – geared	%	27.3

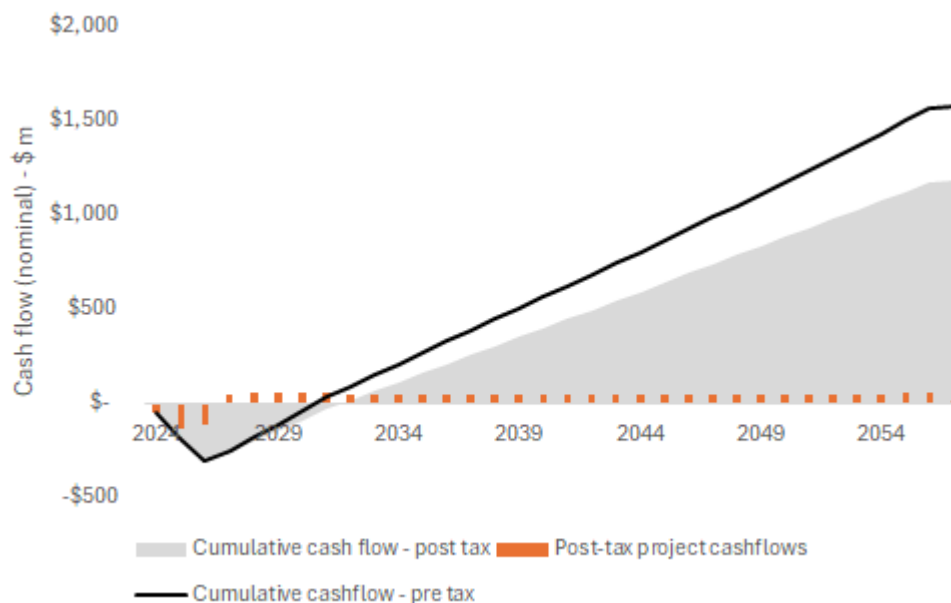


Post-tax IRR – geared	%	21.6
Post-tax NPV <sub>7%</sub> – geared	\$m	262

**Table 11: Project Returns – Base Case**

1 – Debt funding is indicative, subject to completion of the project financing process  
 2 – Equity returns and NPVs are indicative, subject to completion of the project financing process

The modelled life of operation cumulative post tax cash flow (nominal) totals \$1.2Bn, as shown in Figure 25. Strong cash flow generation can be applied to expansions, life extensions and / or future dividends.



**Figure 25: Cumulative Cash Flows**

### Scenario Analysis

A Base Case and Stress Test scenario have been modelled, with the assumptions shown in Section 8 above.

Both Scenarios take Aurora's demand forecast (see Figure 16).

- In the Base Case scenario, coal fired plant closures occur as announced by the Government, and in addition the Bluewaters coal fired power station is retired by 2029. Additional transmission lines are built as outlined in the Government's SWIS Demand Assessment<sup>24</sup>, and renewable capacity is added with a one-year delay to account for construction and grid connection timeline risk.
- In the Stress Test scenario, there is no delay in renewable capacity additions and Bluewaters remains operating until 2031.

<sup>24</sup> [https://www.wa.gov.au/system/files/2023-05/swisda\\_report.pdf](https://www.wa.gov.au/system/files/2023-05/swisda_report.pdf)

The two scenarios were analysed given the various inputs described above.

P&L Items		First 5 years	
		Base Case	Stress Test
Revenue	A\$ m	74.0	60.7
Cost of Sales	A\$ m	5.9	5.9
EBITDA	A\$ m	<b>68.1</b>	<b>54.8</b>
Project Returns			
Payback	Yrs.	5.8	7.2
IRR - Unleveraged (Pre tax / Post Tax)	%	18.1 / 14.8	14.7 / 12.0
IRR - Leveraged (Pre tax / Post Tax)	%	27.3 / 21.6	25.7 / 21.1
NPV - 7% - Post Tax	A\$ m	263	158

**Table 12: Scenario Outcomes**

## 10. Debt Capacity

Energy sales and LGC revenue is premised largely on the merchant market. The Company believes locking in a Power Purchase Agreement (**PPA**), while potentially supporting debt capacity, would be detrimental to the Company for several reasons. These include limiting the upside that we believe is likely on the WA energy market, as well as reducing our ability to participate in other future industries such as hydrogen.

However, the RCP is potentially substantial and can be locked in for five years. This will support debt capacity and Frontier has appointed Leeuwin Capital Partners as debt adviser to the Company secure third party debt finance offers.

## 11. Project Schedule

Frontier plans to commence Enabling Works in 1Q24, in preparation for FID in 2Q24. Concurrently, project finance (debt and equity) will be raised.

Post FID and Financial Close, Western Power delivery is on the critical path. As per the Interconnection Works Contract, Western Power will take 24 months to complete its scope ready for commissioning, which is expected to take a further 4 months, meaning there will be 28 months from Western Power project initiation to first sale of energy onto the grid.

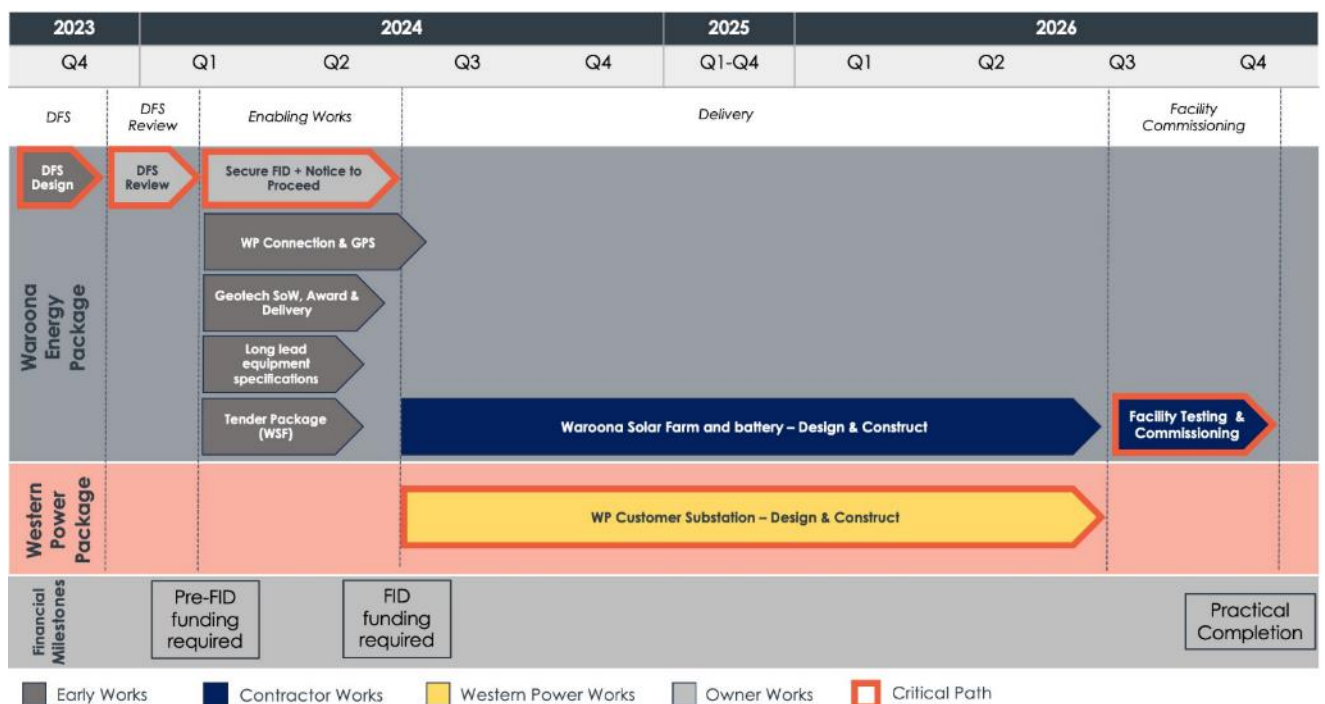


Figure 26: Schedule for Project delivery

## 12. Consultants










Consultant		Study component
Leeuwin Capital Partners		Debt financing
Barrenjoey		Strategic investor engagement
Aurora Energy		Economic parameters and Price forecasts
Incite Energy		Solar farm engineering
SpringCity		Battery integration engineering
ResourcesWA		SWIS Grid review
AECOM		Environmental
Golder		Geotechnical assessment and pile design
Aspentech		Project Control Systems

Table 13: Project Consultants

## 13. Glossary

Abbreviation	Meaning
AEMO	Australian Energy Market Operator
BESS	Battery Energy Storage System
DSOC	Direct Sent Out Capacity
ESOO	Electricity Statement of Opportunities
FID	Final Investment Decision
MLF	Marginal Loss Factor
MW DC	Megawatt Direct Current
NEM	National Electricity Market
PV	Photovoltaic
SWIS	South West Interconnected System
WEM	Wholesale Electricity Market

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

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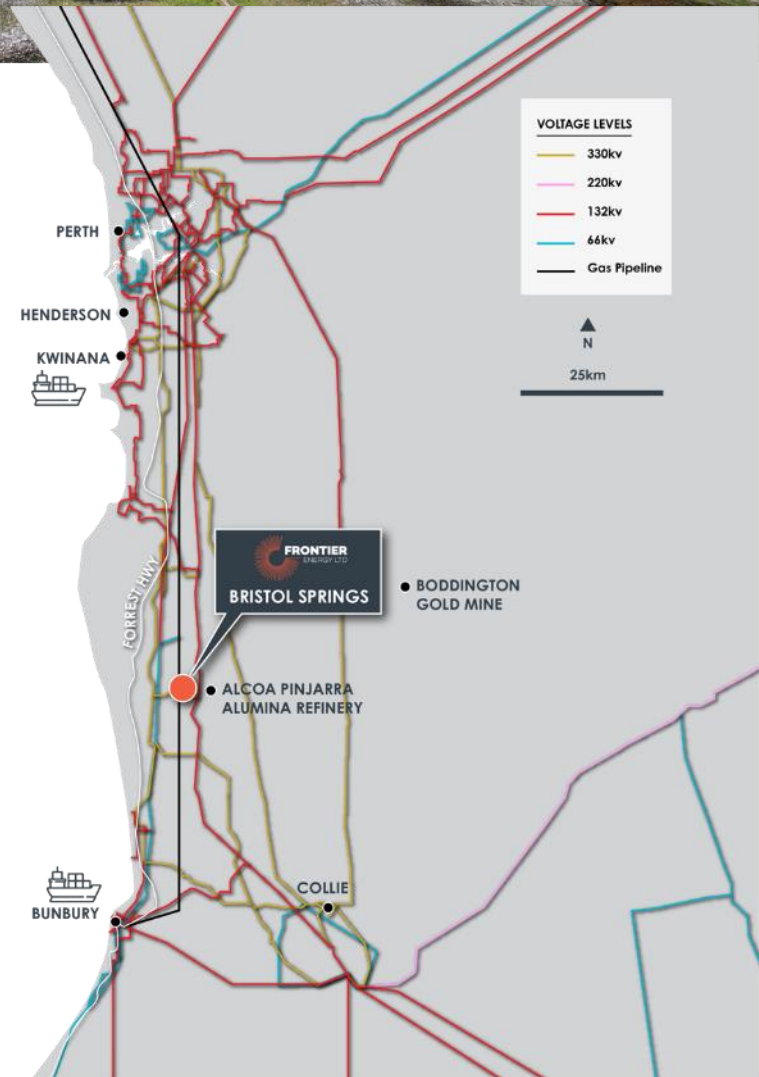
## About Frontier Energy

**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 of 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 highly 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

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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](http://asx.com.au) and [frontierhe.com](http://frontierhe.com), respectively.