



Clean energy to help fill Western Australia's growing supply gap

Euroz Hartleys Rottneest Conference 2024

ASX: FHE
OTCQB: FRHYF
March 2024

Artist impression of solar facility





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ACKNOWLEDGEMENT OF COUNTRY

Frontier Energy acknowledges the traditional custodians throughout Australia and their continuing connection to the land, waters and community. We pay our respects to all members of the Aboriginal communities and their cultures; and to Elders both past and present.



Energy transition in WA is already seeing higher energy prices

Current status of the renewable energy transition

- WA and Australia both had ~35% of electricity generated in 2023¹ from renewables, well short of the 2030 target of 82%
- The energy transition affects both supply (replace fossil fuels with renewables) and demand (electrify everything)
 - AEMO forecasts WA electricity demand to increase between 78% and 220% over the next decade

Record demand already being seen

- WA experienced the six highest demand periods since the beginning of the WEM during February 2024 alone²
 - Record day of 4.2GW - 90% supplied by fossil fuel generators

Energy prices are also at record highs

- Average prices up more than 70% in the past two years
 - WA electricity prices most expensive in Australia - \$84/MW compared to Victoria at \$26/MW³
- Reserve Capacity Prices (RCP) up by 78% over the past three years (\$251,000 in 25/26)³

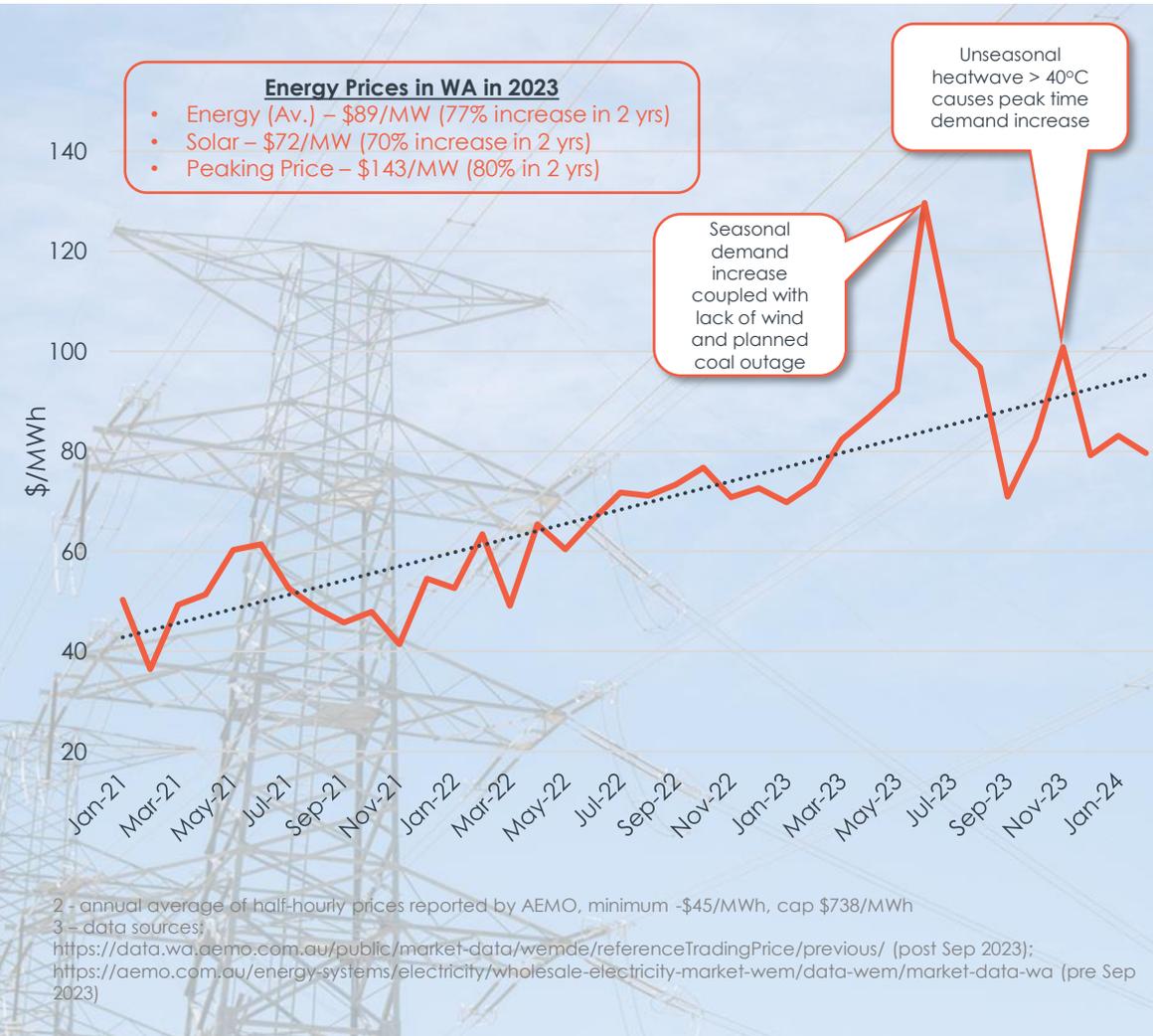
1 – <https://opennem.org.au/energy>

2 – 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

3 – <https://aemo.com.au/energy-systems/major-publications/quarterly-energy-dynamics-qed>

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

Monthly WA Wholesale Electricity Price^{2,3}





Frontier’s strategic advantages overcome key challenges in the clean energy transition

Key issues

Frontier’s Advantage



Network needs modifications / extensions

- Legacy networks heavily concentrated in urbanised areas
- Renewable generating assets need large land areas where networks are not established

- Two connections points (one approved ETAC and one in progress) on the largest capacity section of the network (330kv line)
- Freehold landholding – 868ha
- Majority of permits and approvals in place



Demand / Supply mismatch

- Quicker roll out of new energy consuming products (e.g. EVs) results in increasing demand
- Phase out of fossil fuel generators - Closure of the State owned coalfired power stations by 2029 results in reducing supply

- DFS complete – FID by mid 2024
 - *First production late 2026*
- Stage One is only ~10% of potential capacity



Renewable electricity supply is intermittent

- Peak renewable supply does not typically coincide with peak electricity demand
 - Multiple stand-alone batteries are planned

- 80MW (4 hr) integrated DC coupled battery
 - *Lower costs and transition loses*
- Maximise profitability through arbitrage and Reserve Capacity Payments (only in WA)

2 – https://aemo.com.au/-/media/files/electricity/wem/planning_and_forecasting/esoo



Stage One DFS delivers strong results and platform for growth

Strong economic returns, low technical risk and ability to expand quickly

Stage One Strategy – 120MWdc solar, 80MW / 320MWh battery

- All revenue/pricing assumptions provided by independent energy forecaster, Aurora Energy Research
- Base Case EBITDA – \$68.1m (5 year average) – Stage One only
- Rapid payback – 4.6 years (pre tax) / 5.8 years (post tax)
- Strong IRR – Geared (70%) – 21.6% (post tax) & 27.3% (Pre tax)
- Stage One accounts for ~10% of the Project's potential

Production and Capex

Item	Units	DFS	
Life of operation	Years	30	
Solar			
Solar Capacity	MWdc	120	
Energy Production (Yr 1)	GWh	258	
Battery – 4 hr			
Nominal capacity – 4 hr	MW	80	
Storage capacity	MWh	320	
Initial Capital Costs			
Stage One – Solar and BESS	A\$ m	\$304	
Payback			
	Units	Pre Tax	Post Tax
Years (pre tax / post tax)	Yrs	4.6	5.8
IRR			
		Pre Tax	Post Tax
Ungeared	%	18.0%	14.8%
Geared, leverage 70%	%	27.3%	21.6%





Multiple revenue streams, potential increase in a rising market

Strong forecast average revenue of \$74m per year over the first 5 years

Reserve Capacity Payments (RCP) – \$27.1m (36% of revenue)

- Unique to WA - not in any other Australian State
- Payment per MW based on RCP – Yr 1 \$300,000 / MW, locked in for 5 years

Energy Sales – Battery (peaking period) – \$19.6m (27% of revenue) – see Appendix 2

- Targeting high demand, high price period when renewables less reliable (5pm-9pm)
 - Average peak price in 2023 – \$145/MW 78% increase over past 2 years
- Battery to charge during low or negative price periods (middle of the day) to maximise arbitrage

Energy Sales – Solar direct - \$12.9m (18% of revenue) – see Appendix 2

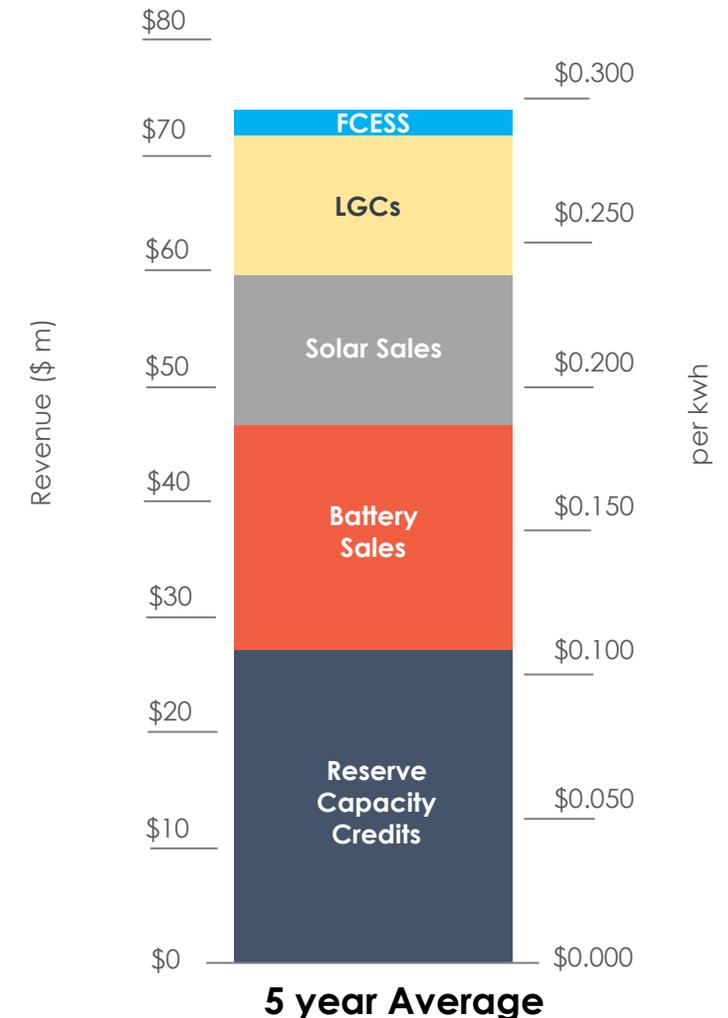
- Sell energy during shoulder periods and charge battery in low price/peak supply
 - Minimal economic curtailment (<1%) compared to solar only (8%)

LGC – \$12.1m (16% of revenue) – see Appendix 3

- Government backed carbon credit for electricity producers

FCESS \$2.2m (3% of revenue)

- Payment for assisting in maintaining security and reliability of supply



1 – <https://www.erawa.com.au/cproot/23833/2/2024-benchmark-reserve-capacity-price-for-the-202627-capacity-year.PDF>
 2 – <https://www.wa.gov.au/media/43698/download?inline>



Why is WA different? Reserve Capacity underpins development

Unique to WA and a major driver in development strategy

Reserve Capacity Mechanism (RCM)

- RCM is unique to WA, not available in the Eastern States (NEM)
- Under the RCM, generators receive annual payments per MW, based on a Reserve Capacity Price (RCP)
 - *New generators can lock in the RCP for five years*
- RCPs have increased strongly over the last three years
 - *When the market is in deficit an additional 30% is applied to the RCP*

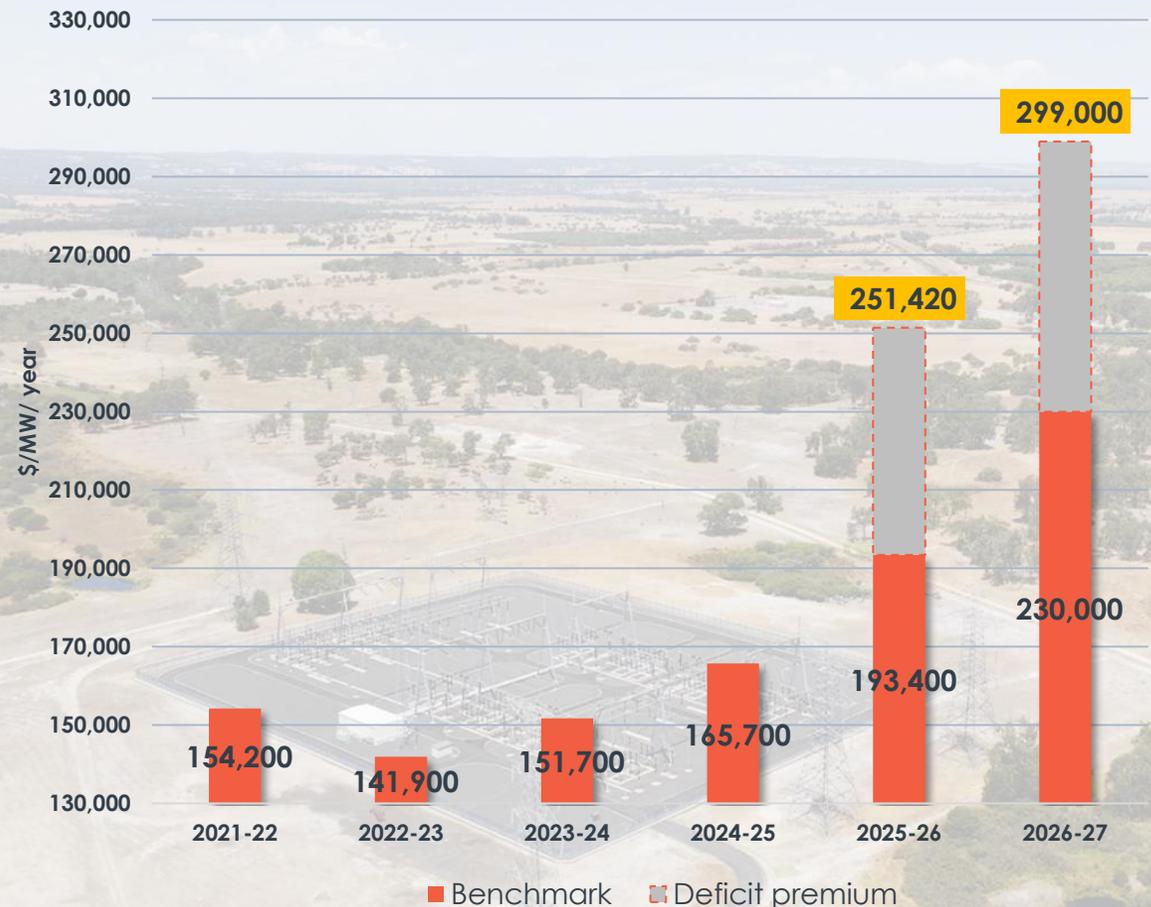
Battery the new reference technology

- In Dec 2023², the WA Government selected a 4-hour battery with a 330kV connection as the future benchmark technology
- Potential to extend lock in period from 5 years to 10 years

Advantage for Frontier

- RCP provides an additional, fixed \$24m in revenue
- Fixed multi year revenue stream enables increased leverage

Reserve Capacity Payment¹



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

2 – <https://www.wa.gov.au/media/43698/download?inline>

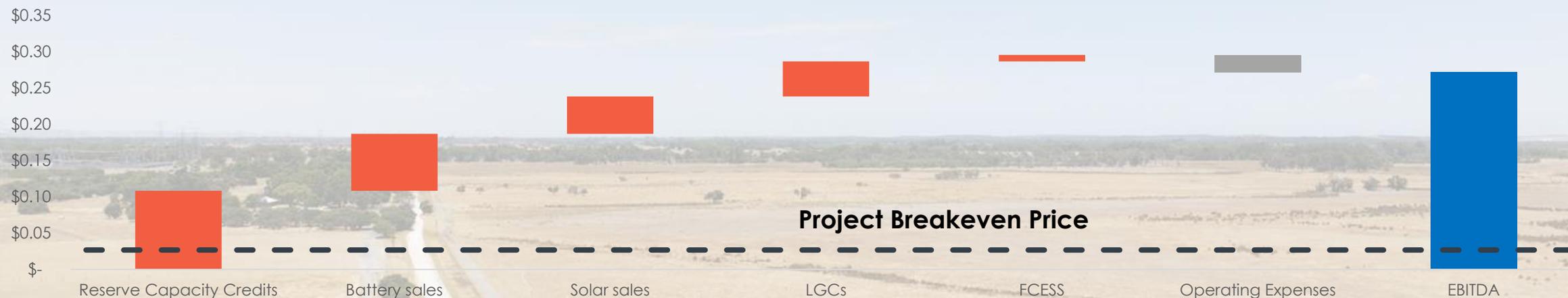


Low operating costs ensure long term sustainable profitability

Long life, low operating costs in first world jurisdiction ensures favourable funding solutions

- Once constructed, renewable energy projects are typically always profitable (over the course of a year) due to their:
 - *Low operating costs*
 - *Reliability of production*
 - *Limited additional capital development requirements*
- Stage One opex is forecast at \$5.9m pa (5 year average)
 - *This equates to a direct operating cost of approximately 2.4c/kwh (excluding financing costs) compared to revenue of 29.6c/kwh*
- Strong annual EBITDA of \$68 million pa over the first 5 years of production

Cashflow Waterfall – First 5 years of production (average)





Funding Strategy – Debt and strategic partnership process

Targeting minimal future dilution for existing shareholders through dual funding strategy

Debt Financing

- Debt financing for renewable energy projects attract highly favourable terms compared to other industries
 - *Long tenors and low interest rates*
- Appointed Leeuwin Capital Partners, highly experienced advisor with experience in WA renewable energy sector
- Discussions with all major local banks and international banks already taken place
 - *Information Memorandum and data room to be opened shortly*
- Indicative debt proposals – 2Q24

Strategic Partnership

- The Company has received multiple unsolicited approaches over the past 12 months from a range of major groups
- The Company has appointed leading Australian advisory firm Barrenjoey as Corporate Advisor in connection with exploring a potential strategic partnership Project development
- The strategic partnering process has commenced and will seek to introduce a high-quality strategic partner that can provide equity capital to support FID of Stage One and accelerate additional growth Stages

DEVELOPMENT TIMELINE

	Stage One	Stage Two – indicative	Stage Three – indicative	Future Expansion Potential
Size of project (solar/battery) 4 hour battery storage throughout	120MWdc / 80MW	250MWdc / 160MW	400MWdc / 270MW	400MW+
Timing	Target FID – mid 2024	Right strategic partner will allow for accelerated development to commence within <u>6-12 months of Stage One FID</u>		Long-term target



Building a major WA renewable energy company



Stage One DFS complete – FID on track for mid-2024



Growth potential of +1GW of renewable energy in an unconstrained section of the grid



Strongest ever market conditions for renewable energy deployment



Ongoing news flow as we progress project development through 2024

CAPITAL STRUCTURE

446m

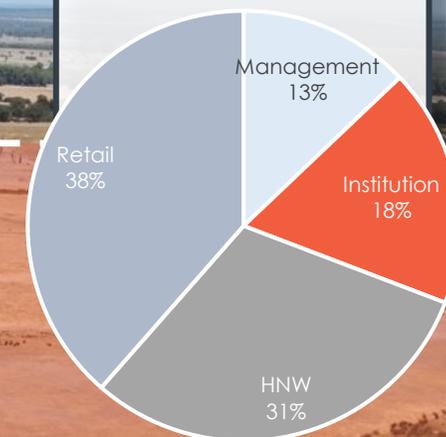
Shares on issue

\$176m

At \$0.395 / share
Market Cap

~\$12m

Dec 23
Cash





For more information contact

Adam Kiley

CEO

+61 8 9200 3428

akiley@frontierhe.com

ASX: FHE

OTCQB: FRHYF

frontierhe.com

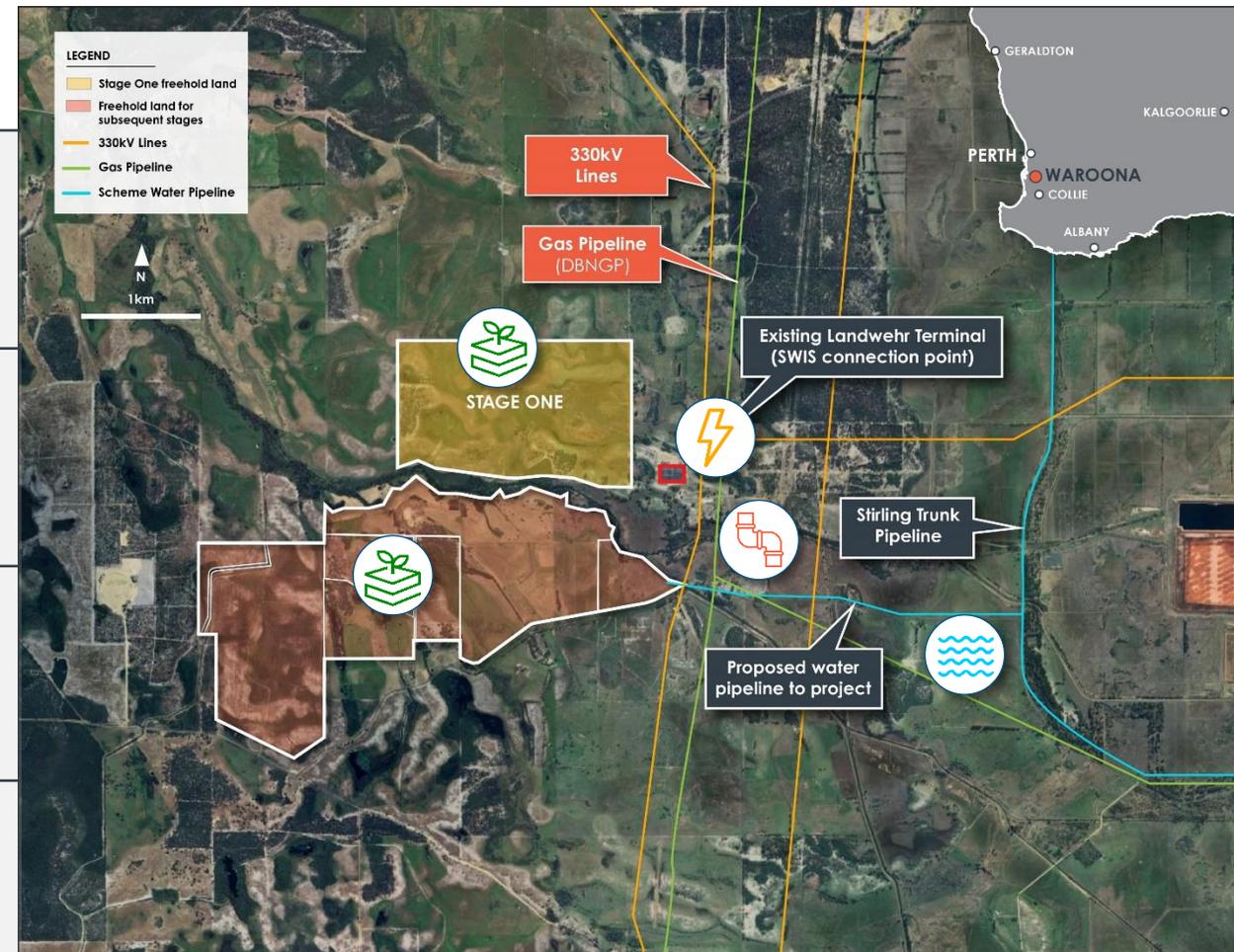




Appendix 1 - Ready for green hydrogen when the time is right

The market for hydrogen is in its infancy. Frontier has completed a study¹ and remains well placed to develop green hydrogen once the market matures. Infrastructure already in place would cost > \$1bn and take > 5 years to replicate.

Infrastructure	FHE – already in place	If this aspect was not in place, what would be the barrier?	Cost to replicate	Additional time & requirements
 Power Terminal	Network connection potential > 1GW ¹	No access to electricity market	\$100m to \$500m a new terminal	3-5yrs (min.) Requires studies completed by Western Power
 Free hold land	868ha ² , sufficient for multiples of Stage One solar No native title	Limited opportunities with surrounding infrastructure	No identical opportunities in WA No tenement system for renewables - WA	+5yrs Requires Permits and Approvals
 Gas pipeline (DBNGP)	Potential peaking power plant energy supply and hydrogen offtake	No access to natural gas No opportunity for H2 / natural gas blending	\$100m to +\$1bn	+5yrs Requires Permits and Approvals
 Water access	Agreement w/ Water Corp for 1,250 KI/day ³	Desalination Plant required	\$100m to \$1bn (size dependent)	2-5yrs (min.) Environmental studies Approvals



1 – ASX announcement 20 March 2023; 2 – ASX announcement 4 September 2023; 3 – ASX announcement 14 March 2023



Appendix 2 – Battery enables revenue uplift through arbitrage

Opportunity to increase received electricity price, while minimising risk of curtailment

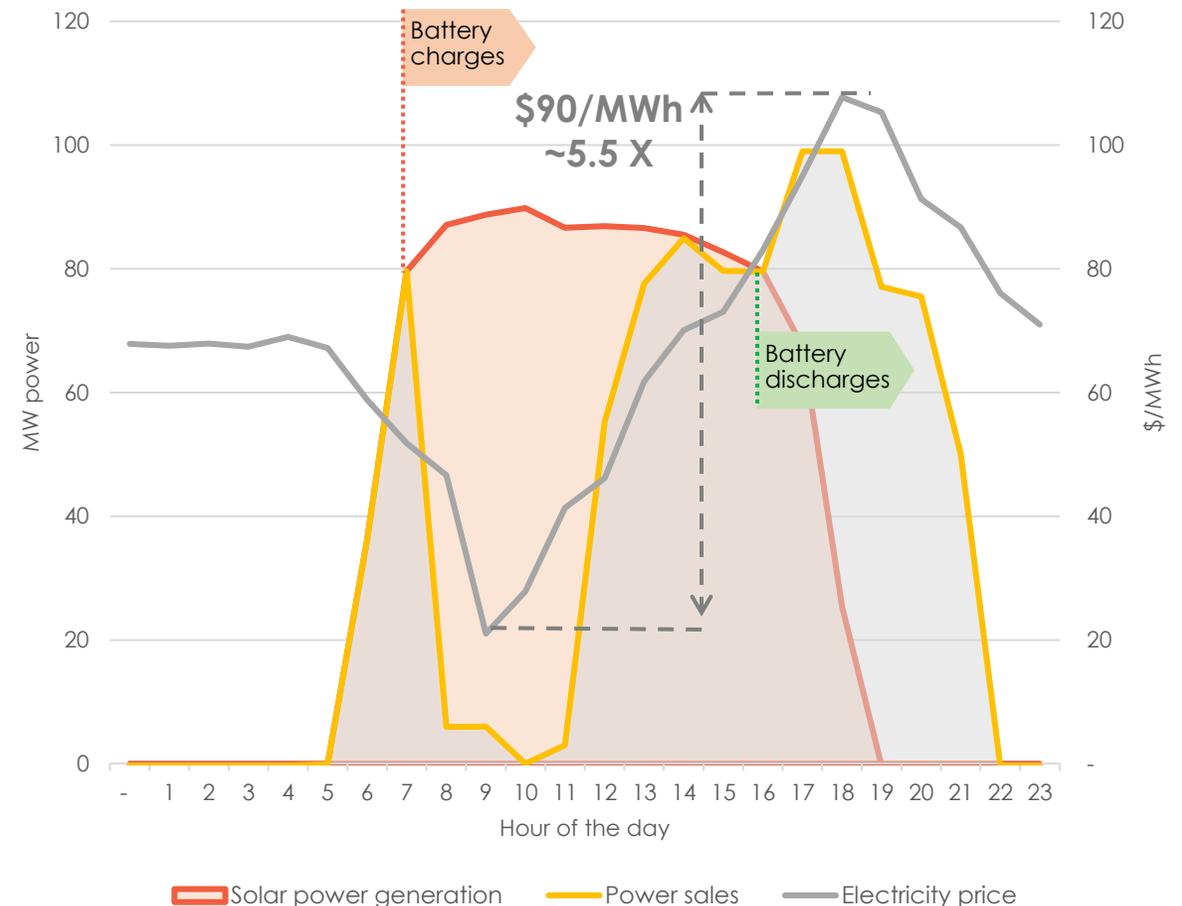
Electricity price follows supply and demand

- WA has the most sunlight hours in the country and one of the highest installation rates of rooftop solar (PV) at 38%¹
 - Expected to increase to ~ 50% by 2030
- Price dips during the day when solar generation peaks
- In the afternoon / evening, demand increases while solar generation declines, causing price to rise sharply

Battery allows for revenue uplift and reduces curtailment risk

- The integration of a battery allows electricity sales to be 'shifted' – i.e. electricity is stored in low price periods and sold in high price periods
- 80MW four-hour battery sized to enable substantial shift of electricity sales
 - Solar energy sales – early morning shoulder period
 - Battery charge – morning to midday
 - Battery discharge combined with solar sales – early evening (during peak electricity demand)

Electricity revenue uplift example – January 2023



¹ – https://aemo.com.au/-/media/files/electricity/wem/planning_and_forecasting/esoo/2023/



Appendix 2A – Price forecasts and revenue – Electricity¹

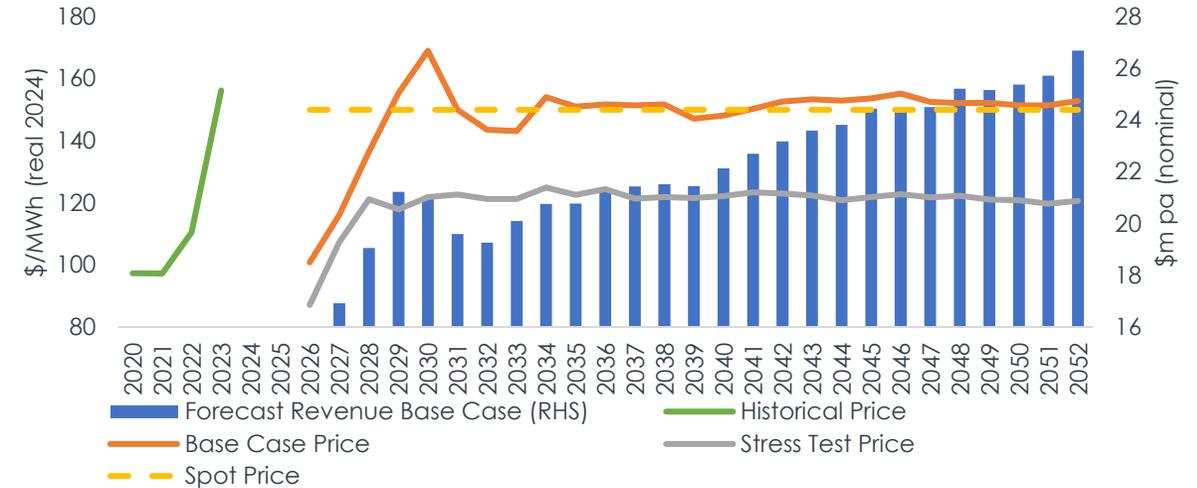
Battery price and revenue

- The Base Case battery price forecast is ~\$150/MWh (close to Spot), with the Stress Test scenario ~\$120/MWh.
 - Early volatility due to adding battery storage >1GW by 2027 and rolling off ~1.3GW coal fired generation by 2029²
 - Revenue around \$23m per annum (nominal average)

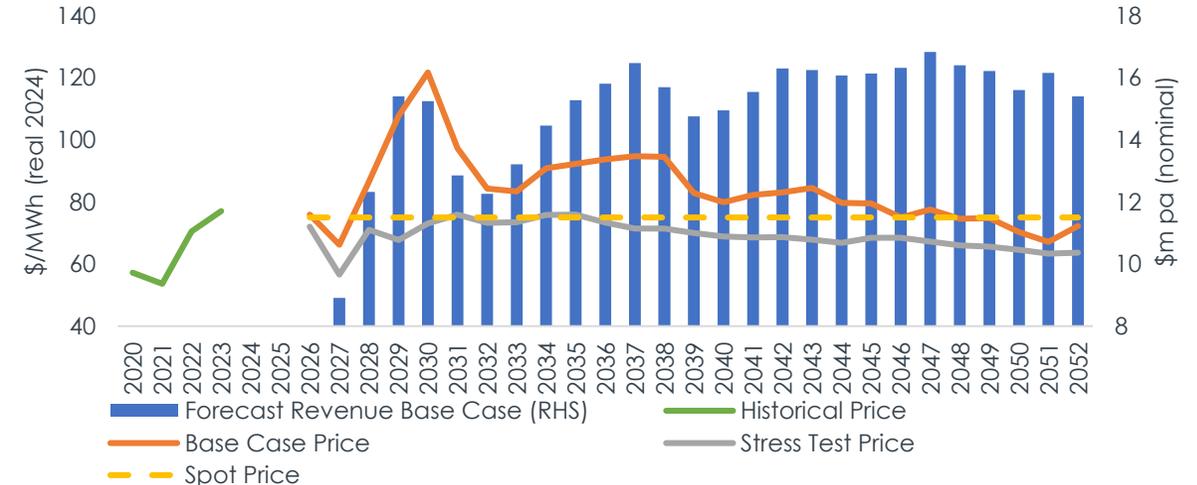
Solar price and revenue

- The solar price forecast captures only hours in which the battery is not being charged, i.e. very early morning before charging commences, and late afternoon once the battery has been charged and solar energy is again available for dispatch.
 - During low and negative price intervals in the morning and mid-day, the battery is charged, and no solar power is dispatched to the grid. These intervals are excluded.
- The Base Case and Stress Test scenarios are above and below the Spot of \$75/MWh, respectively, with the Base Case showing near term price strength due to supply demand mismatch
 - Revenue around \$15m per annum (nominal average)

Battery



Solar



¹ – 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.
² – https://aemo.com.au/-/media/files/electricity/wem/planning_and_forecasting/esoo/2023/



Appendix 2B – Price forecasts and revenue – RCP and LGC

RCP price and revenue

- The BRCP has been set at \$230,000 per MW for 2026/27¹
 - As the market is forecast to be in deficit, an additional 30% premium is applied
 - New generators can lock this in for 5 years²
- Forecast beyond 2031 is provided by Aurora based on its wholistic model of the WEM, taking into account supply / demand and the cost to build and run new capacity
 - RCP Revenue averages \$23m (nominal)

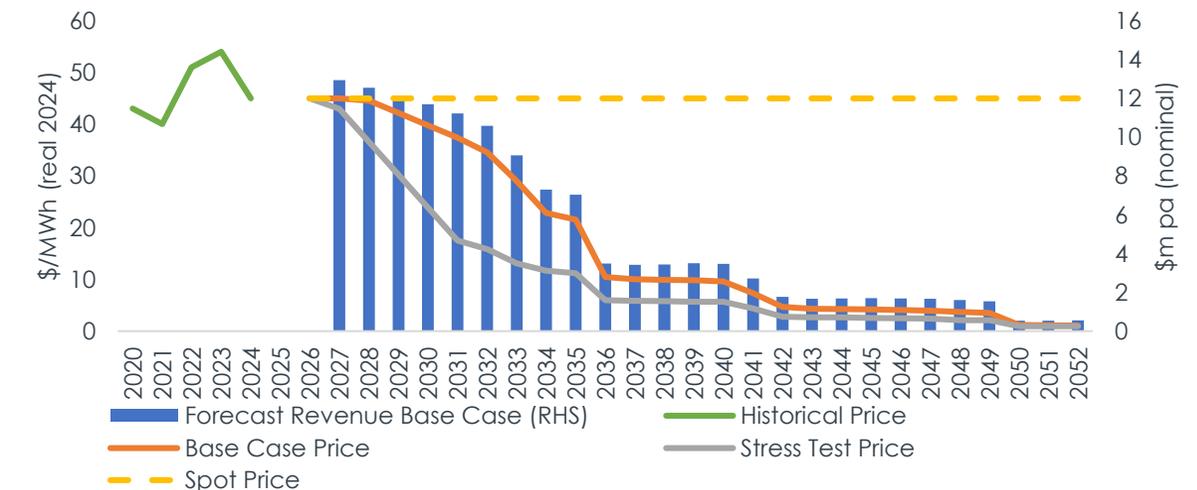
LGC price and revenue

- LGCs have fulfilled their purpose, and could be replaced by a Guarantee of Origin Scheme from 2030.
- Despite this, LGC prices have remained strong, with Spot \$45 and range between \$40 and \$68 over the past three years.
- A carbon fungibility scheme could result in LGC prices of \$8 – 35 in the 2030s, and this informs the Base Case.
 - Revenue averages \$5m, declining from an initial level of ~\$12m post 2030

RCP



LGC



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

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



Appendix 3 – Large Generation Certificates (LGCs) beyond 2030

The Federal Government has released a consultation paper on green certificates to replace LGCs beyond 2030

Renewable Energy Guarantee of Origin (REGO) certificates: proposed design

- Federal Government is consulting on a replacement for LGCs (which are due to expire in 2030). REGOs could be introduced by 2024 as an alternative green certificate, to sit alongside the LGC scheme (and eventually replace it).
- A renewable MWh can only create one type of certificate, not both, to avoid double-counting
- Below-baseline generation would be eligible to make REGOs (i.e. a significant amount of Australia's hydro generation would become eligible)
- Small-scale systems, offshore systems, and systems that export power overseas directly would all be eligible, as would storage (if it surrenders a REGO to show it charged from renewable energy)
- All demand for REGOs will be voluntary

Key attributes of each certificate

- Existing attributes of LGCs (fuel source, year of creation, state, creator, certificate owner)
- Time of generation (hour + date)
- Grid location (e.g. NEM, SWIS, DKIS, off-grid)
- Surrenderer and reason for surrender (e.g. to create a hydrogen Guarantee of Origin certificate, or to create a storage REGO certificate)
- Power station commissioning date

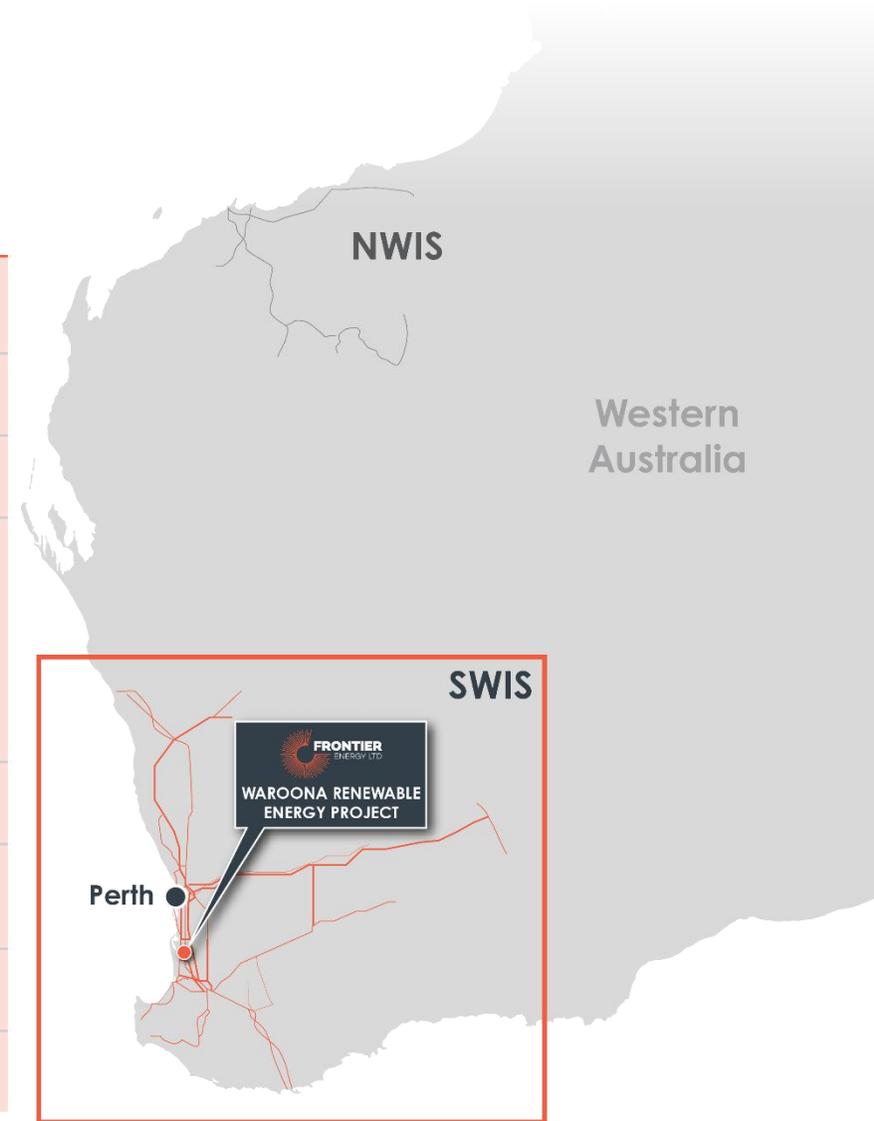
These additional attributes could allow for price differentiation of REGOs, with some buyers putting a premium on new plants (to demonstrate additionality) or seeking REGOs to match the time and location of their power use (24/7 CFE)





Appendix 4 – WEM compared to the NEM

	Wholesale Electricity Market (WEM)	National Electricity Market (NEM)
Installed capacity (MW)	~7GW (+2GW rooftop solar)	>50GW (+20GW of rooftop solar)
Annual operational demand	~18TWh	~190 TWh
Peak operational demand	4GW	36GW
Market structure	<ul style="list-style-type: none"> • Separate energy + capacity • Day ahead market and balancing market • Pooled • Physical • Only operates in the SWIS 	<ul style="list-style-type: none"> • Regional energy only • Spot market only • Pooled • Financial • 5 state network
Maximum spot price	\$738/MWh	\$16,600/MWh in FY24
Regulatory bodies	<ul style="list-style-type: none"> • Economic Regulation Authority (ERA) • Energy Policy WA 	<ul style="list-style-type: none"> • AER • AEMC
Market operator	AEMO	AEMO
Largest three generation companies	Synergy (state-owned), Alinta, Bluewaters (JV)	AGL, Origin Energy, Stanwell (state-owned)



Sources: AEMO, Western Power, Aurora Energy Research, Energy Policy WA, ERA



Appendix 5 – Frontier’s key advantage – grid connections at a central node

Frontier’s high quality, unconstrained connection onto the network enables uncurtailed renewable energy sales

- The SWIS is the major electricity network in WA
 - Peak operating demand - 4GW
- WA Government plans to expand the grid, however most upgrades will not occur until post 2030
 - Excluding approvals, permitting and development etc which can take a further +6 yrs

Frontier can potentially access two grid connections on the large voltage line (330kV) – low constraint and surrounded by major industrial consumers

- An independent report¹ highlighted that before 2030, only Landwehr Terminal (Project location) can accommodate new large-scale renewable generation of 250MW or greater

AEMO’s 2023 ESOO report² forecasts a decade of deficits

- Major capacity deficit forecast: > 1.0GW by 2027 & 4.0GW by 2032
- AEMO forecasts demand increase of 78% to 220% over 10 years

How will the gap be filled?

- Reliance on batteries, to be charged with excess PV solar
- New utility scale renewable generation falls significantly short of replacing coal fired generation planned to be closed by 2029

1 – ASX announcement 2 November 2023; 2 – https://aemo.com.au/-/media/files/electricity/wem/planning_and_forecasting/esoo

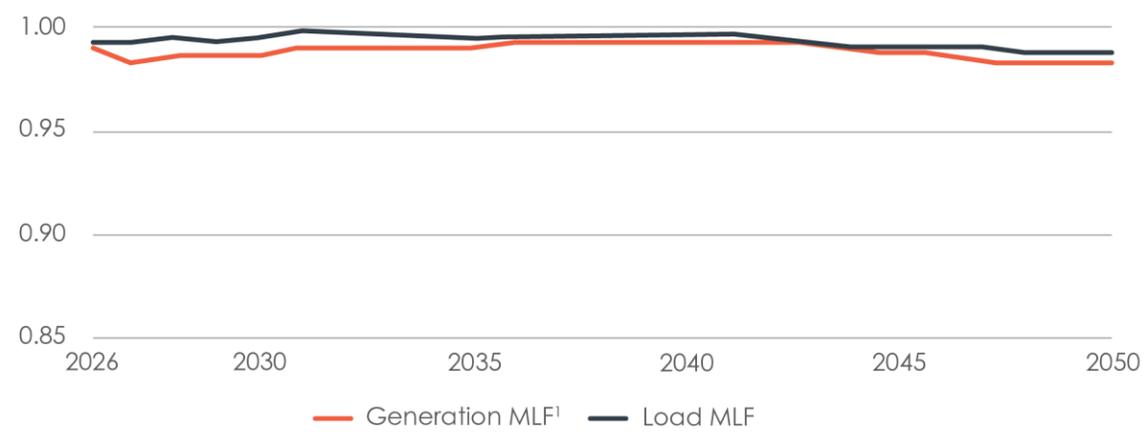


Major new project developments (2024 – 2027) ²	Size
Wind generation	256MW
Solar generation	220MW
New Generation pre 2027	476MW – intermittent
Coal fired closures 2029	-1,200MW – firm
Batteries	1,335MW – 4 hour discharge



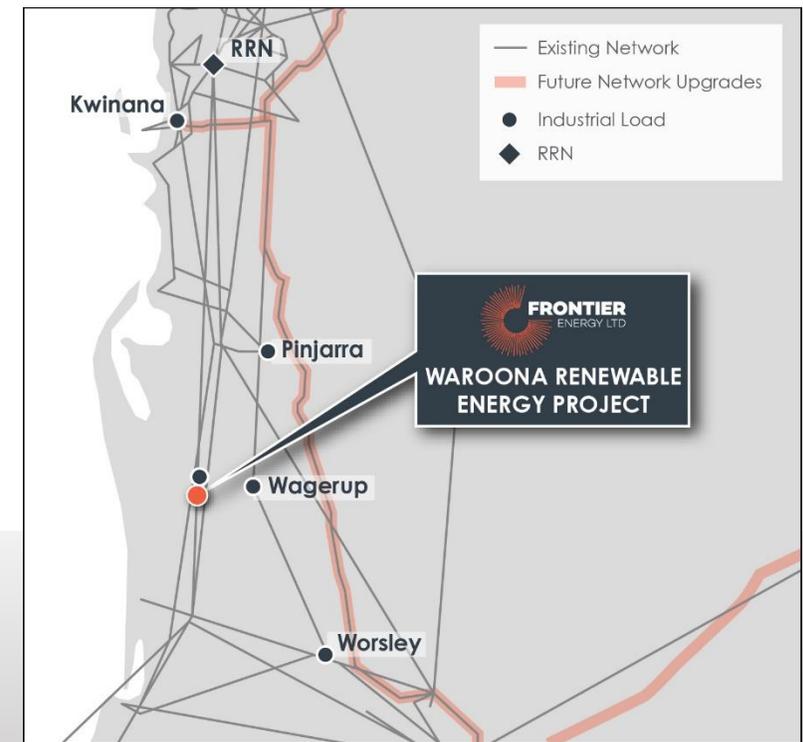
Appendix 6 – Waroona Solar Farm/BESS is expected to see robust MLFs over the forecast horizon, due to its well-connected surrounding network

MLF for Waroona Solar Farm/BESS – Aurora Central



- Waroona Solar Farm/BESS' generation MLFs are expected to remain highly robust over the forecast horizon, residing in the 0.984 – 0.993 range, so are the Waroona BESS' load MLFs, residing in the range of 0.987 – 0.999.
- Key factors that result in Waroona Solar Farm/BESS' robust MLFs include:
 - Being adjacent to the industry load centres, particularly the Wagerup alumina production facility, means the Waroona Solar Farm will make minimal contribution to the network loss and therefore receive high generation MLFs
 - The transmission lines connecting Waroona Solar Farm to the RRN and industrial loads are at high voltage (330 kV), which makes the Waroona Solar Farm's MLFs robust

Central scenario WA network augmentations



- The low density of solar farms around Waroona area means the Waroona Solar Farm usually generates at times when the network congestion is low
- Future network upgrades throughout the 2030s further improves the network robustness around Waroona Solar Farm/BESS, resulting in continuously robust generation and load MLFs



Appendix 7 – Renewable and battery projects for the SWIS

WA renewable energy projects with announced development plans¹ – 476MW new generation capacity so far announced, while 1,200MW to be closed by 2029. 1,335MW battery storage is planned to firm up renewables

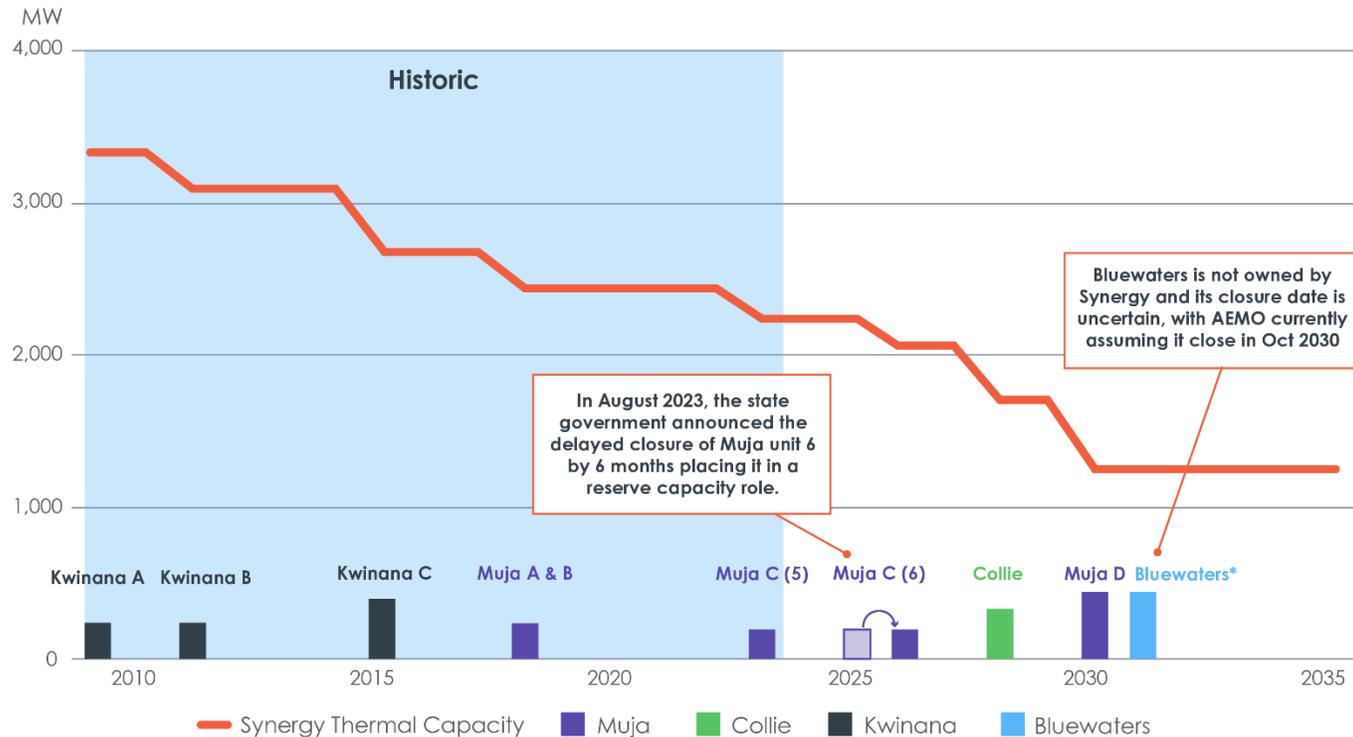
Project	Forecast production	Size	Owner
Wind			
Flat Rocks Wind Farm Stage 1	FY2024	76MW	Enel
Flat Rocks Wind Farm Stage 2	FY2026	~100MW	Water Corp
King Rocks Wind Farm	FY2026	~150MW	Synergy
Total wind		256MW	
Battery			
Neoen Battery Stage 1	FY2025	200MW/800MWh	Neoen
Collie Big Battery	FY2026	500MW/2000MWh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

¹ – https://aemo.com.au/-/media/files/electricity/wem/planning_and_forecasting/esoo/2023/



Appendix 8 – Synergy has more than 2GW of thermal capacity today but has announced closure dates

Synergy coal and gas plant capacity, and coal plant retirements¹



¹ – Coal is likely to retire at the end of the capacity year (September 30) to meet capacity obligations. In Aurora’s modelling, these retirements are implemented on an annual basis by financial year so the effective implemented retirement date is June 30th

² – Based on 22 March 2023 Reserve Capacity Mechanism Review Working Group discussion paper; Bluewaters would need to operate at a 50% load factor or less, or close one unit, to remain eligible for capacity credits based on a threshold of 4,000tCO₂-e per MW of capacity. Sources: EPWA, AEMO, WA government

Coal closure schedule

- State-owned Synergy is the largest participant in the WEM and is expected to decarbonise in line with WA Government objectives (80% reduction in emissions from 2020 to 2030), with coal unit closures announced with several years’ notice.
- In August 2023, the WA Government announced that Muja unit 6 will have a 6 month delay to its closure date to supply capacity over the 2024-25 summer. It is expected to only operate in a reserve capacity role requiring prior notice from AEMO to synchronise with the grid.
- Under the Reserve Capacity Mechanism review, carbon emissions are expected to affect a plant’s accreditation of capacity credits. Under the proposed implementation plan, coal assets could see zero accredited capacity from the 2029 capacity year.²
- The WA Government has announced that Synergy will spend \$3.8b on replacement capacity, and has committed to not build any new gas-fired power plants after 2030
- Bluewaters, the privately-owned 434MW coal-fired power station, is yet to announce a closure date. However, Sumitomo (a half-owner) has written down its share of the plant’s value to \$0.

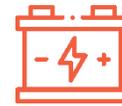


Appendix 9 – Stage One – 120MW Solar/80MW 4-hour Battery

Superior and stable returns, increased funding optionality and lower development risk compared to alternatives. Frontier continues to assess opportunities, including in hydrogen, for future expansion



Solar (only)



Solar/BESS



Hydrogen

	Solar (only)	Solar/BESS	Hydrogen
Market (price) Risk	<p>High</p> <ul style="list-style-type: none"> Large rooftop solar (PV) penetration means risk of low solar price / curtailment Limited reserve capacity (10% or ~\$4m) 	<p>Low</p> <ul style="list-style-type: none"> Reserve capacity – 100% (\$24m + \$4m) locked in Battery provides opportunity to 'shift' energy generated at low price periods to peak periods WA peak energy prices at all time highs 	<p>High</p> <ul style="list-style-type: none"> Hydrogen market still in its infancy Currently requires the development of our own offtake (e.g. a dual fuel peaking power plant)
Technical Risk	<p>Low</p> <ul style="list-style-type: none"> Mature and well-established technology 	<p>Low/medium</p> <ul style="list-style-type: none"> Industry is rapidly maturing in WA High efficiency to store and release solar electricity (~85%) 	<p>High</p> <ul style="list-style-type: none"> Largest electrolyser in Australia currently 10MW, whereas 'right size' for WREP would be ~72MW Relatively low efficiency to convert solar electricity to H₂ and back into usable energy
Funding Risk	<p>High</p> <ul style="list-style-type: none"> Lowest capital investment; however, Without a Power Purchase Agreement (PPA), debt leverage likely to be limited 	<p>Low</p> <ul style="list-style-type: none"> Medium capital investment High debt leverage potential due to substantial fixed Reserve Capacity Payments 	<p>High</p> <ul style="list-style-type: none"> Largest capital investment, as investment in own offtake (e.g. peaking power plant) is required Large Government support required to attract debt
Overall assessment / Comments	<ul style="list-style-type: none"> Lowest capital and technical risk, however revenue not maximised due to low Reserve Capacity Payment and curtailment risk No PPA = minimal fixed returns, lowering fundability 	<ul style="list-style-type: none"> Best economic returns and technical risk ~40- 50% fixed income (RCP) = increased leverage Arbitrage exposure to energy price upside <ul style="list-style-type: none"> DFS confirmed 	<ul style="list-style-type: none"> Future market with excellent potential however still in its infancy Existing infrastructure and Stage One development gives FHE major advantage to be first mover in the future