

# Galilee Energy

## Operations Update



March 2022

ASX: GLL

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# The Prize...

## Multi-TCF Resource



# Work programme for CY2022

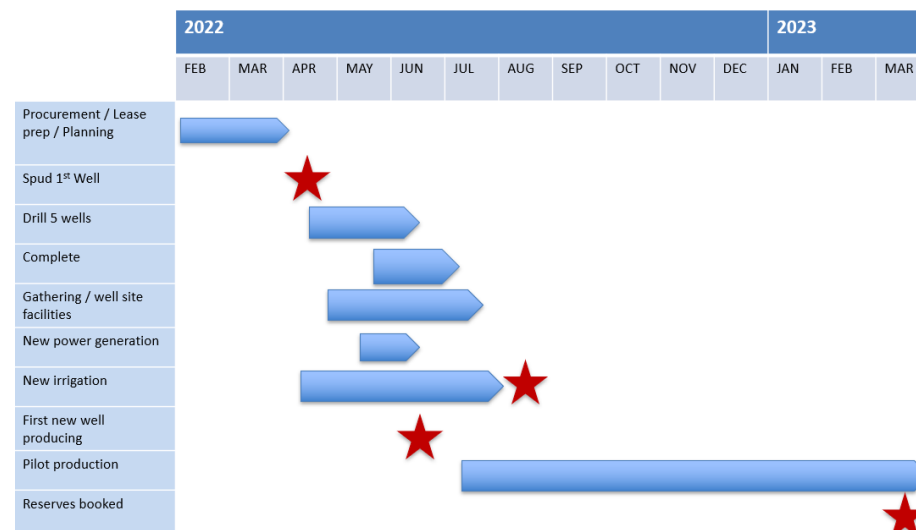
This year's programme aims to commercialise one of the largest uncontracted gas resources on the east coast

## Objectives

- To accelerate depressurisation of the Betts Creek coals and adjacent sands to initiate gas desorption and achieve commercial gas production in support of a material maiden reserves booking.

## The Plan

- Drill and connect 5 new vertical production wells.
- Re-commission and connect Glenaras 3.
- Install and commission new irrigation system to beneficially manage water production and provide additional revenue stream.
- Investigate solar pod to reduce operational power costs.



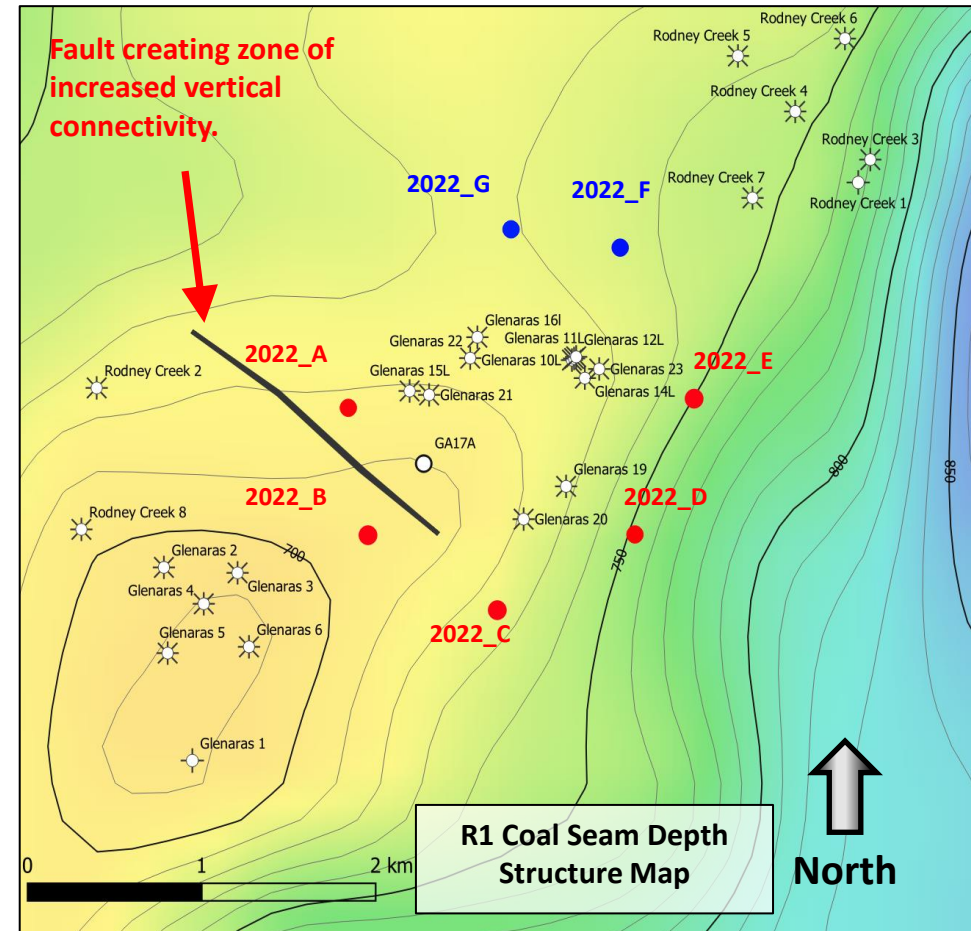
Category	Contingent Resource (PJ)	Area (km <sup>2</sup> )
1C	308	~36
2C	2,508	~1,200
3C	5,314	~2,500



# New wells will enable critical desorption

## Strategically locating new wells will achieve required pressure reduction...

- New modelling undertaken by Schlumberger taking into account the southwestern permeability conduit fault zone has confirmed that the significant pressure sink already created, can be sufficiently enhanced within 6 to 12 months, if 5 new vertical wells (red) are drilled around the southwestern flank of the current pilot.
- Currently producing 17,000 bwpd & 60 mcf/d of very low CO<sub>2</sub> gas





# The Programme...

Drilling April 2022

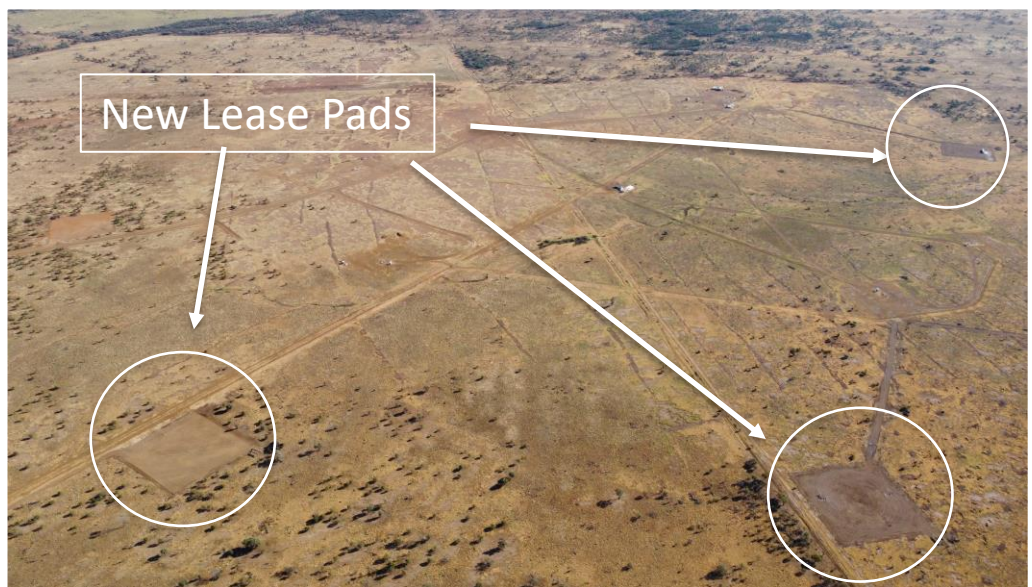




# Project Update - Drilling

Capitalising on over \$100m of previous exploration and appraisal expenditure

- Landowner and environmental approvals in place ✓
- Lease pads and access roads constructed ✓



- Conductor pipe installation & general site prep ✓



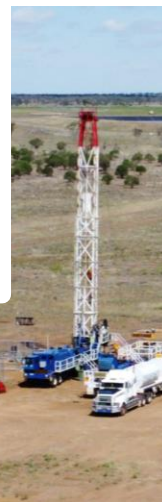
Early site preparation enabled GLL to execute drilling and ancillary contacts immediately upon funding



# Project Update - Drilling

All major contractors engaged in process...

- Drilling rig contract executed with Silver City ✓
  - Spud scheduled mid-April
- Wild Desert completion rig and equipment ✓
  - Crew mobilised mid-May



Wells pads and roads are complete for immediate access upon rig availability



# Project Update - Drilling

All long leads are either on site or will arrive in the coming weeks

- All long lead equipment ordered last year starting to arrive now ✓
- 313,000kg of casing arriving on-site ✓
- 13km (47,000kg) of electrical cable delivered ✓
- 7km (24,000kg) of HDPE (poly pipe) delivered ✓
- Metering skids delivered to site ✓
- **New wells will increase water production capacity to 30,000 bwpd**

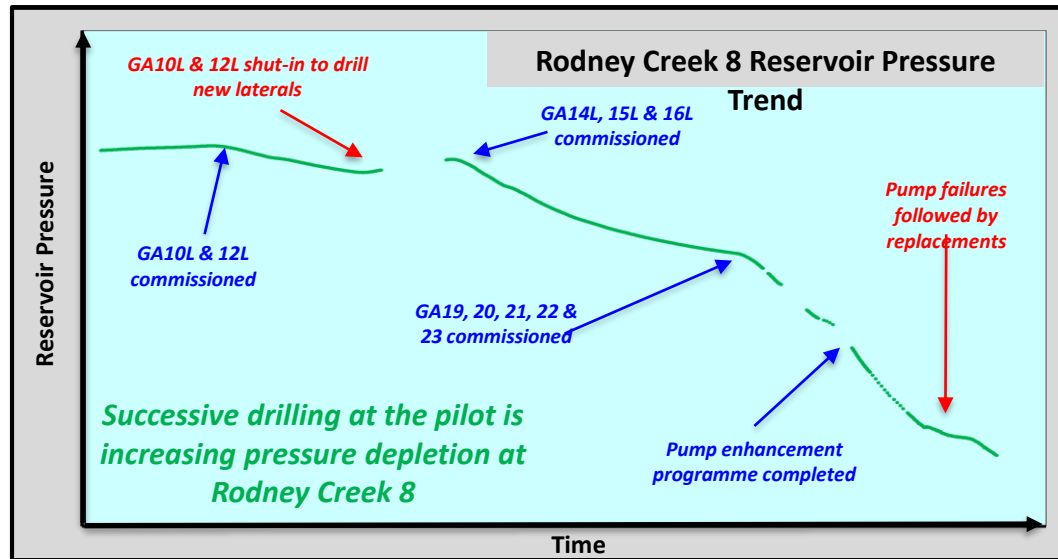


**Pilot infrastructure designed and capable of handling estimated high side water rates**

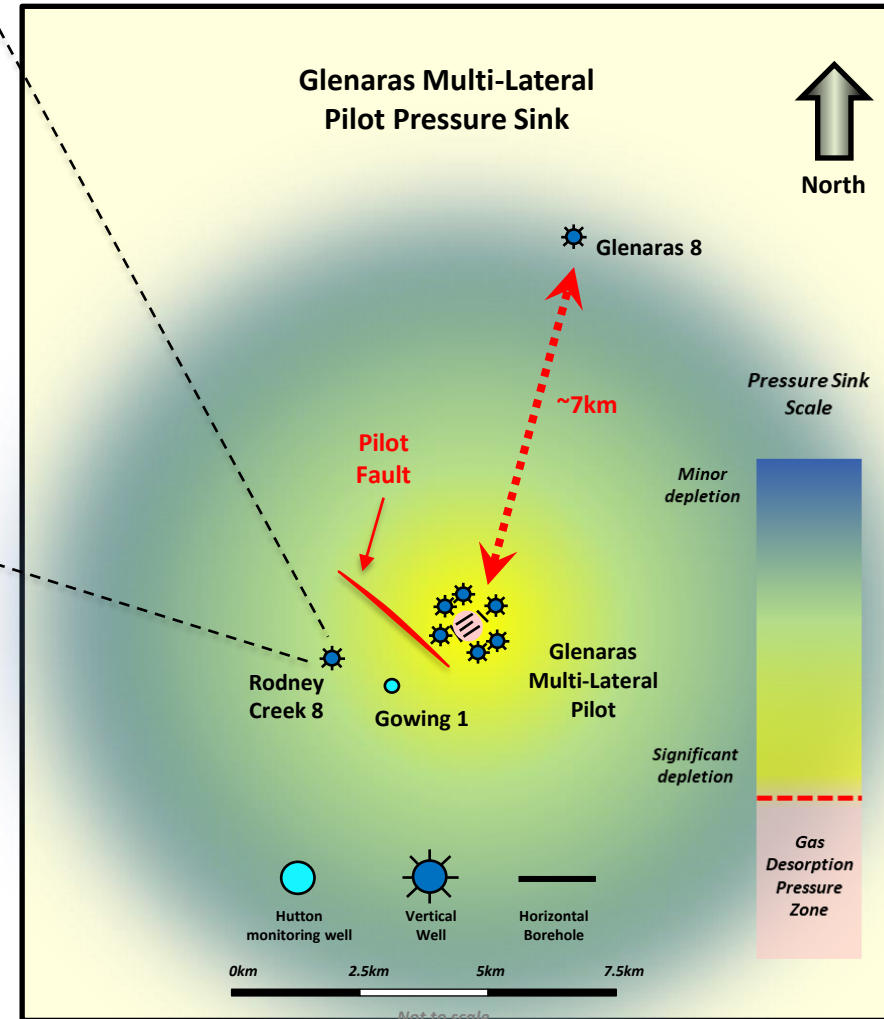


# Are the large water production rates a problem?

Regional pressure monitoring would suggest **NO** and proves water-bearing sands are being overcome, despite fault connectivity to coals...



- Rodney Creek 8 Colinlea Sst pressure depleted by pilot despite water crossflow from the fault.
- Glenaras 8 measurably depleted over 7km away from pilot in the R3 & R4 coal seams, confirming a material volume of coal is close to being desorbed.
- Regional depletion proves the pilot is effectively dewatering all Betts Creek coals, leading to a potential material initial reserves booking in early 2023.





# Project Update – Water Handling

Given the water is essentially fresh, high water production rates are offset by beneficial outcomes associated with irrigation and other “green” initiatives

- Agreement to expand farming and irrigation area with landowners obtained ✓
- Additional 50 ha of land to be cleared and prepared for irrigation
  - New travelling irrigator purchased ✓
  - 20 tonnes of urea purchased ✓
  - 8 tonnes of fertiliser purchased ✓
  - 4 tonnes wizard oates purchased ✓



Irrigation offers a significant value add and should be considered a net positive to the Glenaras project



# Working with Reliable Partners

## 2022 Drilling Program Contractors

**Silver City Drilling**  
Drilling



**Wild Desert**  
Completion



**Wasco**  
Gathering



**Galilee Basin Haulage & Plant Hire**  
Transport, earth moving & equipment



**Schlumberger**  
Testing



**Halliburton**  
Cement



**Alliance Automation**  
Production Data



**CS Gas**  
Surface Equipment



**Shellby Power**  
Power



## Development Phase Counter-parties already engaged



**Jemena**  
MOU for sales pipeline



**Alinta**  
Potential gas customer



**Clarke Energy**  
Power provider

**Sunshot Energy**  
Renewable energy hub

**Solid relationships across the value chain with quality counterparties**





# The Market...

Gas is the transition fuel of choice

# Australian East Coast Gas Dynamics

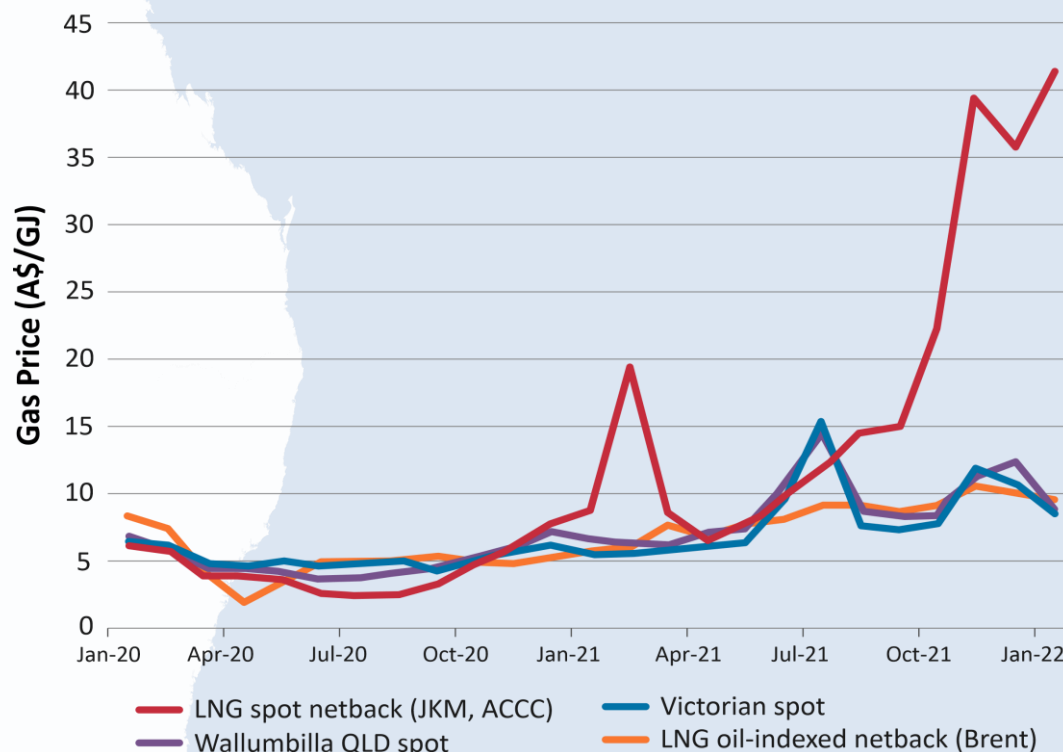
- Increasing influence of global LNG prices on domestic gas prices.
- **Current LNG netback (post Ukraine conflict) ~A\$60/GJ.**
- Current Wallumbilla Qld spot price ~A\$9.40 – a massive discount to LNG netback price.
- Upwards pressure on east coast prices as Gladstone LNG producers divert gas into spot LNG cargoes rather than the domestic market.
- Continuing trend of tight gas supply and rapidly declining east coast gas production.



## Elon Musk calls for urgent increase to oil and gas production after Russia invades Ukraine

Tesla CEO Elon Musk has called for an urgent increase to oil and gas production, saying the world needs, “energy to power civilisation.”

**International and East Coast Gas Prices (A\$/GJ)**



Source: Energy Quest March 2022 Report

**East coast gas prices have a very long way to run**



# Australian East Coast Gas Dynamics

## FINANCIAL REVIEW

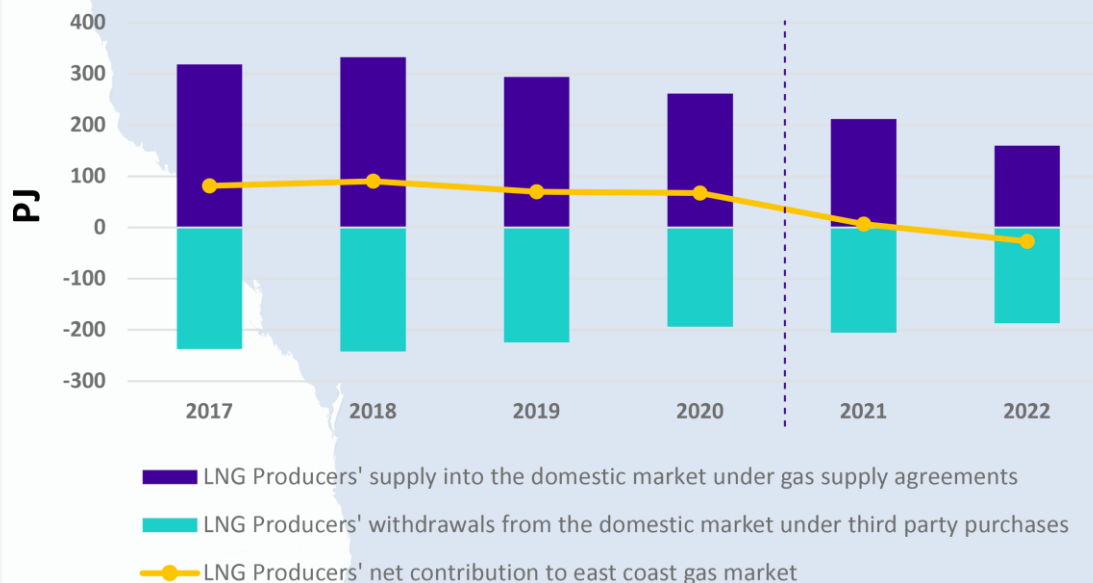
### Gas project fits in ESG investing, says Global Infrastructure Partners

Rob Stewart, managing partner at Global Infrastructure Partners Australia, insisted the (Pluto) project compared favourably with other gas projects that are needed to smooth the global energy transition to renewable sources.

While promoting renewables, Mr Stewart said gas would be vital in transitioning the global economy from the biggest polluting fossil fuels such as coal to renewables.

- Recent trend of LNG producers purchasing more 3<sup>rd</sup> party gas from domestic market than they have supplied into that market.
- The forecast ACCC supply has reduced since the ACCC July 2021 interim report.
- Federal government may tap LNG producers to divert some of their export gas into domestic market.
- Given the value delta between global LNG prices and domestic gas prices, local uncontracted gas reserves are becoming increasingly more valuable.

## LNG Producers' Net Contributions to the East Coast Gas Market



Source: Obtained from ACCC analysis of data as reported in the July 2020 report and LNG producers as at February 2020, September 2020, March 2021 and August 2021.

## FINANCIAL REVIEW

### Macquarie CEO keeps the machine humming

Macquarie Group chief executive Shemara Wickramanayake said an “orderly transition” was required.

“On the one hand, it’s a massive challenge that we have to meet, and we just don’t have the solutions to get there for 2050 at the moment across all the sectors,” she said.

“And the worry is that we lose the mandate for the transition if we have consumers having to pay crazy energy prices [and facing] job losses.”

# Early phase gas commercialisation

Clarke Energy MoU enables pilot gas to be used in power generation for field and local uses instead of gas being flared...

- Assessing staged installation of a gas fuelled power station at the Glenaras Gas Project.
- Co-operation to install gas fired electricity generation to connect Galilee's initial gas production to the grid.
- Flexibility to contribute to local power requirements at the Glenaras Gas Project.
- Environmental advantages through the beneficial use of pilot production gas.
- Early cashflow, proof of concept for initial development phase, prior to FID on full field development.

## Clarke delivery model

1.

Gas Genset



2.

Power Module



3.

Power Plant



4.

Solar PV, Wind



Gas Engines



Diesel Gensets



Battery Storage

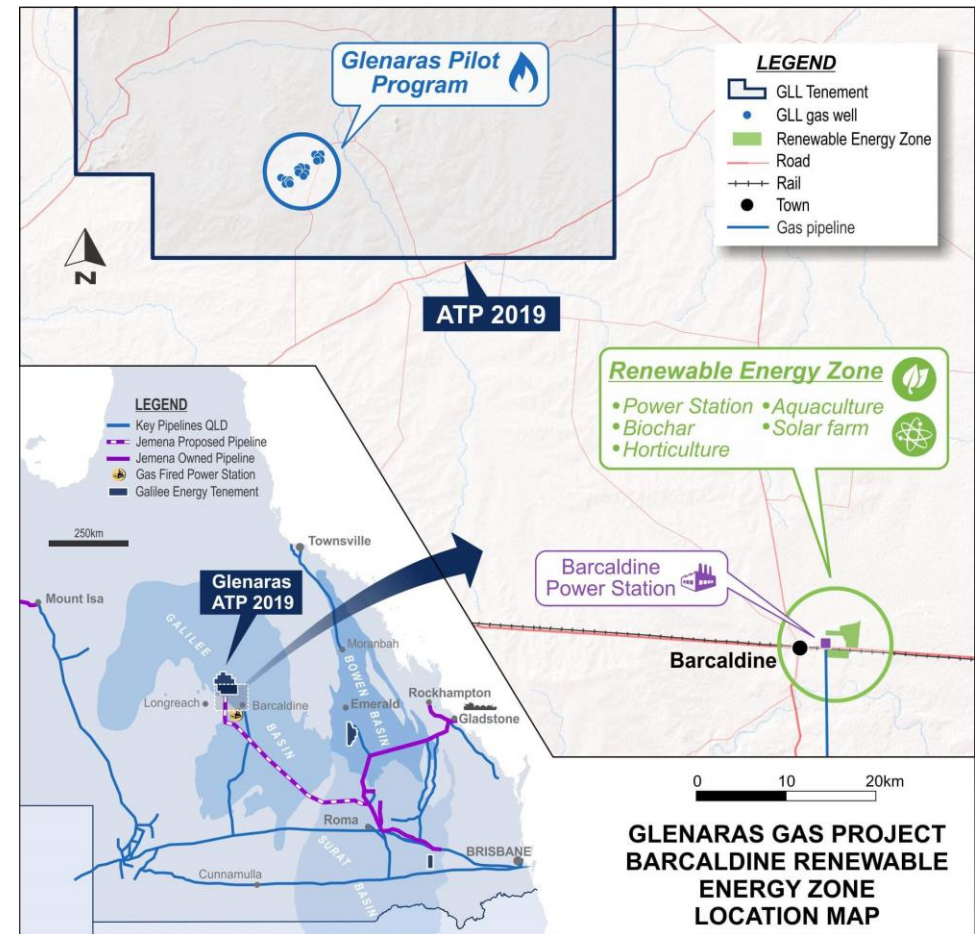
Early cashflow, proof of concept for development



# Early phase gas commercialisation

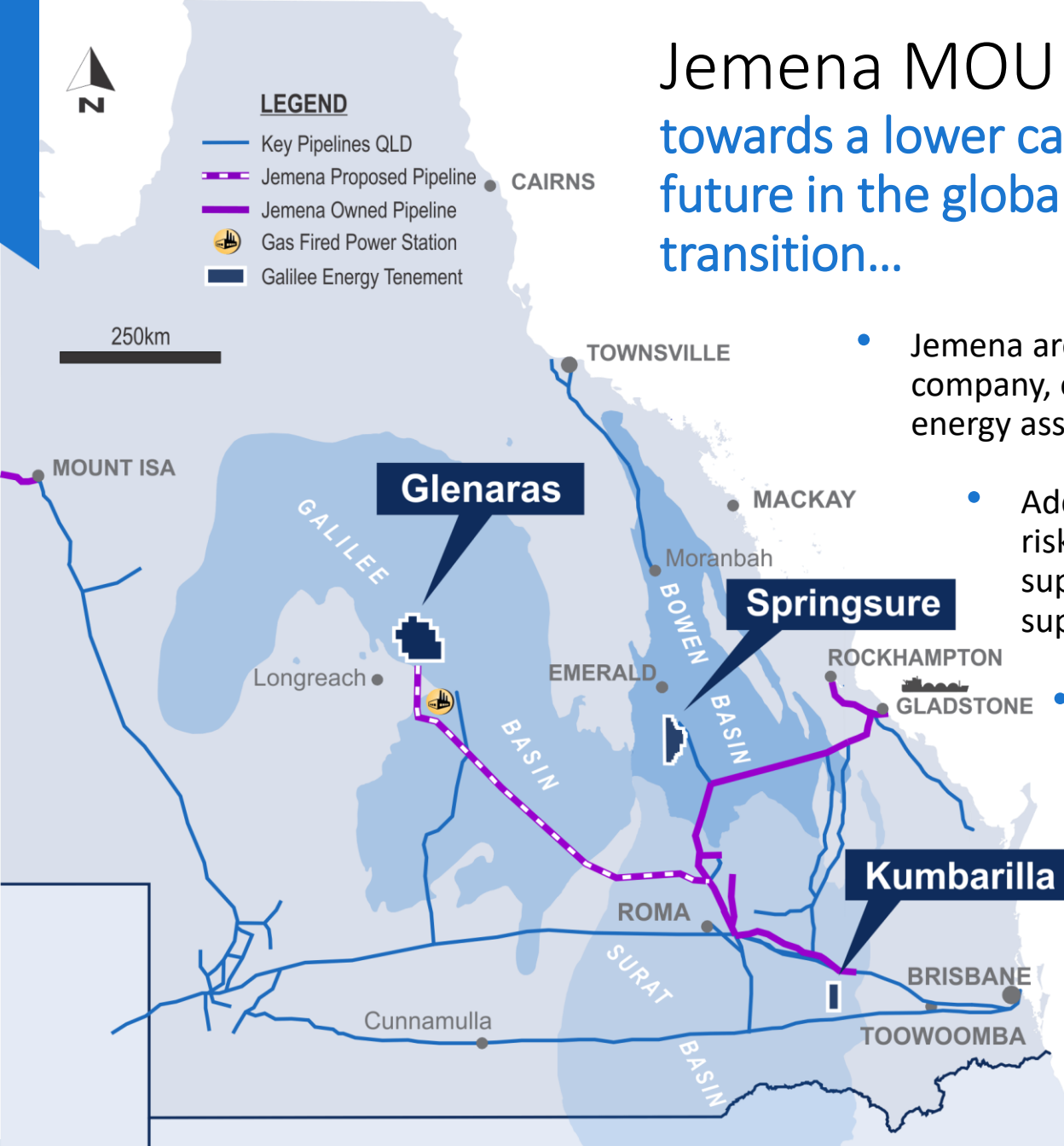
Galilee Basin identified by Federal Government as a key Basin to be unlocked as part of the “gas led economic recovery” ...

- MoU with Sunshot to explore provision of zero carbon hydrogen to the Galilee pipeline, zero net emission electricity and other services and cooperation on water uses and CCS.
- Barcaldine presents a number of early phase commercial gas sales opportunities. Barcaldine has an existing gas fired power station owned by Energy Queensland which is connected to the grid.
- Multiple opportunities within the Barcaldine Renewable Energy Industrial Zone (BREZ), which has strong local and state government support.
- ACCC Gas Inquiry – Jan 2021 Interim Report clearly identifies the need for projects such as the Glenaras Gas Project to address forecast gas supply shortfalls.



Large scale renewable hub on the doorstep of Glenaras

# Jemena MOU - working towards a lower carbon future in the global energy transition...



- Jemena are a \$11.5 billion energy infrastructure company, operating some of Australia's most critical energy assets.
- Address the forecast gas shortages by de-risking substantial contingent resources, to supply affordable gas, creating new jobs and supporting regional communities.
- Low CO<sub>2</sub> clean gas with low anticipated development costs for supply into the domestic market.
- Jemena have mapped out the pipeline route corridor with the aim of protecting local culture and heritage.
- Aerial surveys have been conducted.

**Pathway to east coast gas market for large scale gas volumes**





- Alinta has been a generator and retailer of reliable and affordable energy to Australia for over 20 years.
- Alinta sell gas and electricity to over 1 million customers and employ 800 people across Australia and New Zealand.
- Energy portfolio includes power stations, transmission lines and natural gas pipelines in Australia.
- Working to make energy more affordable, underwriting or directly investing in 1,500MW of large scale renewable energy by 2025.
- Other renewable generation projects across Australia include solar power, battery storage and major wind farm operations.

## MoU in place for the supply of gas from Glenaras Gas Project





# The Future...

Ideally placed to address any future  
emission challenges



# Well positioned for the transition to a lower carbon future

Installation of a solar power system to augment wellsite power for early development activities



MoU with Sunshot. Assessing carbon capture and storage and hydrogen opportunities



Evaluating multiple pathways to market including local gas fired power generation



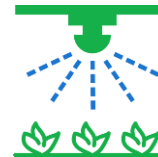
Highly successful yields on forage sorghum, barley and oats. Evaluating potential additional high yield crops



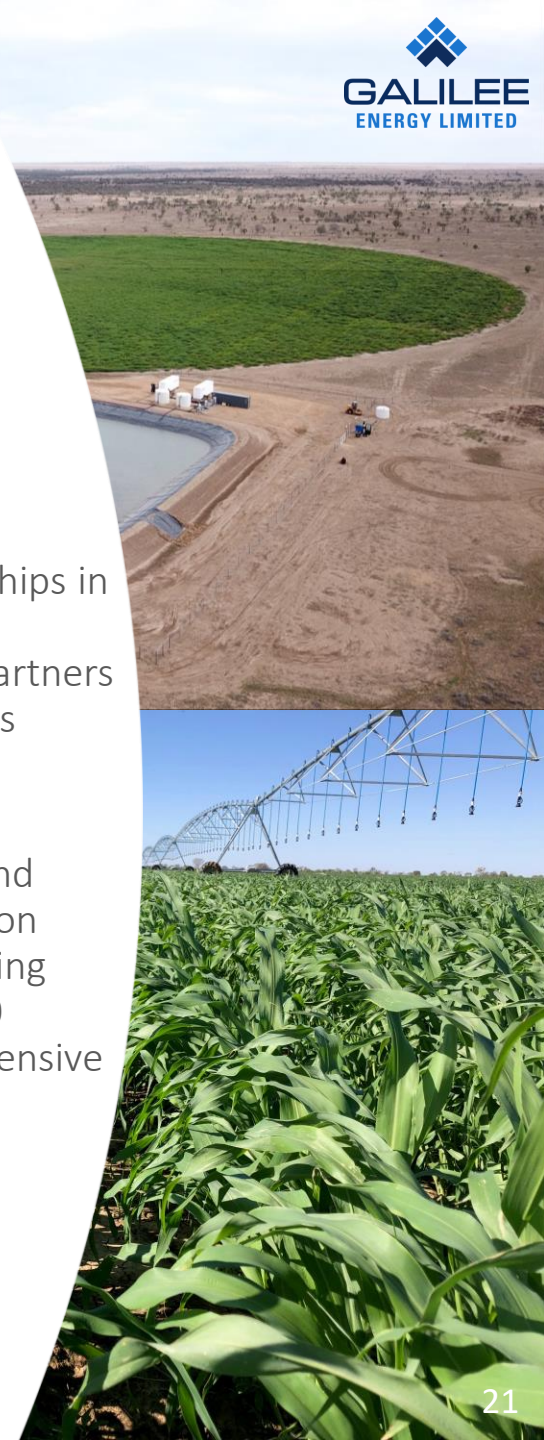
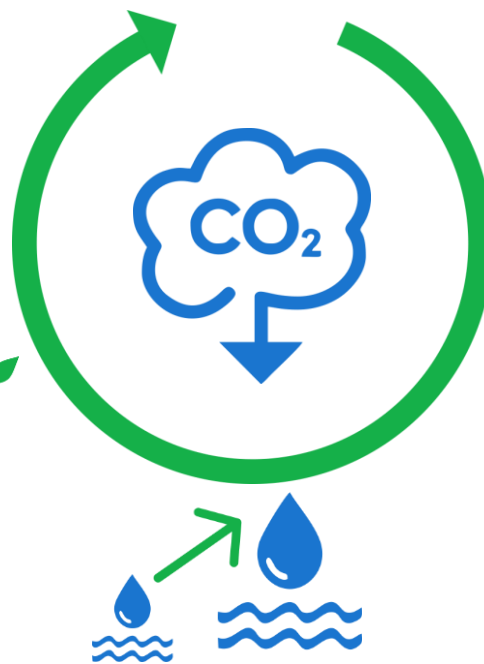
Strong relationships in place with all communities, partners and stakeholders



Centre pivot and surface irrigation systems irrigating more than 100 hectares of intensive cropping



Agricultural soil CO<sub>2</sub> sequestration and other sustainable carbon capture and storage options in coal seams and other deep geological formations





# Appendices





# Appendix 1 – Competent person statement

## + Competent Person Statement and ASX Listing Rules Chapter 5 - Reporting on Oil and Gas Activities

The estimate of Contingent Resources for the Glenaras Gas Project provided in this Presentation, is based on, and fairly represents, information and supporting documentation determined by Mr Timothy L. Hower of Sproule International (Sproule), in accordance with Petroleum Resource Management System guidelines. Mr Hower is a full-time employee of Sproule, and is a qualified person as defined under the ASX Listing Rule 5.42. Mr Hower is a Licensed Professional Engineer in the States of Colorado and Wyoming as well as being a member of The Society of Petroleum Engineers. Mr Hower has consented to the publication of the Reserve and Contingent Resource estimates for the Glenaras Gas Pilot Project in the form and context in which they appear in this Presentation.

The Contingent Resource estimates for Galilee Energy's current 100% interest in the Glenaras Gas Pilot Project located in ATP 2019, provided in this presentation, were released to the Market in the Company's ASX announcement of 1 September 2015 and were estimated using the deterministic method and not having been adjusted for commercial risk.

Galilee Energy confirms that it is not aware of any new information or data that has not already been released to the market, that materially affects the information included in this Presentation relating to the Glenaras Gas Pilot Project in ATP 2019 and that all of the material assumptions and technical parameters underpinning the estimates in the announcements continue to apply and have not materially changed.



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