ENERGY **D**AGM PRESENTATION

14 November 2023

LEGALS



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The estimates of Reserves and Contingent Resources noted throughout this Presentation have been provided by Mr John Hattner of Netherland, Sewell and Associates Inc (NSAI) and were originally reported in the Company's market announcements of 25 January 2012, 26 February 2013, 19 March 2013, 8 December 2015, 28 February 2019, 22 January 2022, 11 July 2023 and 11 October 2023. NSAI independently reviews the Company's Reserves and Contingent Resources. Mr Hattner is a full-time employee of NSAI, has over 30 years of industry experience and 20 years of experience in reserve estimates in the reports by Mr Hattner have been prepared in accordance with the definitions and guidelines set forth in the 2018 Petroleum and Resource Management System (PRMS) approved by the SPE, utilising a deterministic methodology. Blue Energy confirms that it is not aware of any new information or data that materially affects the information included in any of the announcements continue to apply and have not material assumptions and technical parameters underpinning the estimates in the announcements continue to apply and have not materially changed.

changed.

+ Listing Rule 5.28.2: The estimated quantities of petroleum that may potentially be recovered by the application of a future development project(s) relate to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Further exploration appraisal and evaluation is required to determine the existence of a significant quantity of potentially moveable hydrocarbons.

BLUE ENERGY ACREAGE POSITION



FOCUS AREAS FOR BLUE

1. North Bowen Basin

- Sapphire PL and connection into the Moranbah Gas Project for gas sales
- Lancewood Central, Hillalong and Monslatt block appraisal
- Southern gas pipeline
- Defend Land Court appeal by EDO on the granted Environmental Authority

2. Surat Basin Block - ATP 854

- Secure the PCA's
- Drill pilot test well at Cobalt and establish maiden 2P reserves
- Commercialise into proximal infrastructure

3. Northern Territory Acreage

- Process Geoscience Australia Data (newly acquired)
- Assess prospectivity
- Acquire Blue 2D program and possibly drill strat well

Blue's Monetisation Strategy

North Bowen Basin Asset (ATP 814)

North Queensland gas market

- Queensland Pacific Metals and Blue
 - MoU for 112 PJ of gas over 15 years
 Change in ownership of the Moranbah Gas Project to QPME has been key
 Townsville gas offtake underpins initial Sapphire field development <u>utilising existing infrastructure</u>

Southern gas market

- Origin Energy and Blue
 - ✓ Heads of Agreements for 300 PJ of gas over 10 years at Wallumbilla
- Energy Australia and Blue
 - \checkmark Heads of Agreement for 100 PJ of gas over 10 years at Wallumbilla
 - Requires major gas pipeline to connect with Wallumbilla

Surat Basin Asset (ATP 854)

Wallumbilla Gas Hub

- Drill Pilot test well and establish maiden 2P reserves
- Market gas into Wallumbilla hub

FOCUS AREAS FOR BLUE



North Bowen Basin

NORTH BOWEN GAS RESOURCE- LONG TERM, RELIABLE SUPPLY



- North Bowen Basin
 - Has scale 15,000 PJ recoverable gas resource
 - Has been **de-risked** gas production since 2006
 - Has low environmental impact –
 - Has no Great Artesian Basin aquifers present
- Blue has ~3,000 PJ of the gas resource NSAI
 - 8 years of east coast domestic gas demand
- QPM is new owner of the MGP Blue has MoU's with QPM provides access to market
- Fed/State Govt studies for pipeline connection to east coast market positive

North Bowen Resource base⁺

Permit	Block	Certifier	1P (PJ)	1C (PJ)	2P (PJ)	2C (PJ)	3P (PJ)	3C (PJ)
ATP814P	Sapphire	NSAI	-	171.2	90.7	251.7	287.0	256.0
ATP814P	Central	NSAI	-	39		111		469
ATP814P	Monslatt	NSAI	-	-	-	619	-	2,054
ATP814P	Lancewood	NSAI	-	203	-	232		573
ATP814P	Hillalong	NSAI	-	-	-	182	-	237
ATP814P	South	NSAI	-	15	-	27	6	30
Total (PJ)			-	428	91	1,423	293	3,619

BLUE'S SAPPHIRE PILOT DRILLING



Sapphire 5 and 6 pilots targeted the Permian Coal measures:

- Rangal Coal Measures
- Fort Cooper Coal Measures
- Moranbah Coal Measures

Pilot wells located on seismic line BE08-05 close to the intersection with BE08-09 & BE08-10

Adjacent to Arrow's/QPM Moranbah Gas Project, one of Queensland's earliest CSG fields and numerous coal mines (Stanmore and Fitzroy Operated)

Sapphire Pilots located 2 km from existing MGP producing wells



PILOT WELL DESIGN & LOCATION - RECAP





The Pilot configuration is a modified chevron intercept design

- Approx 75m separation between the two vertical wells.
- Two sets of lateral wells intercepting two vertical wells.
- Gas will be produced out of the laterals, with water out of the verticals.
- //L bocations are optimised to straddle the seismic line and allow 1000m of lateral per seam.
- The depth to top coal is ~ 150m at these locations with multiple seams down to 650 metres being targeted.
- Phased drilling sequence verticals drilled first for geological controlled; then pilot series; with 1000+m sections to intercept with vertical wells.

SAPPHIRE RESERVE UPGRADE FROM DRILLING

Permit	1P (PJ)		2P (PJ)		3P (PJ)		1С (РЈ)		2C (PJ)		3C (PJ)	
	new	⁺old	new	⁺old	new	⁺old	new	⁺old	new	⁺old	new	⁺old
ATP 814P, Sapphire Block, Qld	-	-	90.7	66.5	287.0	253.2	171.2	154.3	251.7	213.9	256.0	214.4
% change	-	-	+36.4%	-	+13.0%	-	+11.0%	-	+17.7%	-	+19.4%	-

- 2P Reserves increased to 91 PJ (+36%) **
- 3P Reserves increased to 287 PJ (+13%) **
- 3C Contingent Resources increased to 256 PJ (+19%) **
- Total Sapphire Recoverable Gas Resource Base (3P +3C) = 543 PJ **

Volume required for QPM 15 year/7.5 PJ pa supply MoU = 112 PJ

• There is now full 3P reserve coverage for the QPM MoU Volume

SAPPHIRE – INITIAL DEVELOPMENT PLAN



- The Moranbah Gas Project (MGP) is under new ownership - QPME
- QPME Parent needs gas for new build Ni Refinery in Townsville
- MoU's with QPM for gas supply 1. MoU for 7.5 PJ/annum for 15 years = 112 PJ total supply Daily quantity circa 20 TJ/day
 - 2. Gas from pilot well production
- Design works and budget costing for connection to MGP Node 3 are complete (up to the boundary with PL 191)

SAPPHIRE - NEXT STEPS

Blue and QPME have established optimum pipeline route for connection to MGP Node 3

Sapphire to Node 3 connection gives efficient, low cost and long term access to the MGP and immediate path to local North Queensland market

Existing Gas Supply MoU for QPM Ni plant in Townsville – 7.5 PJ/annum (20 TJ/day) for 15 years

Reserve additions from Sapphire Pilot drilling provide contract volume 3P reserve coverage

Establish deliverability and connect to MGP

- PL Application with Government
- Continue to promote North Bowen Basin pipeline connection

Defend Environmental Authority granted by Department of Environment and Science (subject to Land Court challenge by EDO)

2 x R&D Rebate claims

- Initial claim (2022 tax year) rebate received
- Larger second claim (2023 tax year covering drilling) lodged

FOCUS AREAS FOR BLUE



Surat Basin Cobalt Project ATP 854

BLUE'S OTHER GAS OPTION - ATP 854 - SURAT BASIN





ATP 854 - 100% BLUE - INFRASTRUCTURE NEARBY

Substantial Gas Resource

- Independent NSAI assessment (Jan 2022)
- ATP854 is a material gas resource 398 PJ Contingent Resource Uncontracted *

Favourable location

- Two gas pipelines passing through the permit Connectivity to both Gladstone and Wallumbilla
- Same Permian coal seam gas target as GLNG's Fairview gas field Additional Jurassic Walloon CSG play

Proposed work program

- Pilot drilling program to establish reserves and commercial flow rates
- Vertical well and up to two in seam lateral wells

	Permit	Block	Certifier	1P (PJ)	1C (PJ)	2P (PJ)	2C (PJ)	3P (PJ)	3C (PJ)
AT	P854P		NSAI	-	90	-	194	-	398

 $^{\scriptscriptstyle +}$ See Listing Rule 5 Disclosure Page 2

ATP 854 100% BLUE ENERGY - IN THE HEART OF CSG GAS FIELDS AND INFRASTRUCTURE



THE ATP 854 PERMIAN CSG PLAY





Potential Cobalt production Pilot test wells

FOCUS AREAS FOR BLUE

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NORTHERN TERRITORY



NORTHERN TERRITORY





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SYNERGY BETWEEN GEOSCIENCE AUSTRALIA LINES AND BLUE PROPOSED PROGRAM





Geoscience Australia Lines

Proposed Blue Energy Program

- GA raw 2D data available
- December Blue will selectively process
- Blue will selectively process
- Assess prospectivity

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Plan 2D and strat well for mid 2024



QUEENSLAN

NORTHERN TERRITORY

Forward Plan

Geoscience Australia (GA) acquired regional 2D seismic data in August/September 2023 across Blue's tenements

Blue will acquire the overlapping GA data and process it to assess prospectivity

Blue has lodged Environmental Management Plan for the 2D seismic acquisition

Dependent on results of the GA seismic interpretation, there may be sufficient prospectivity to warrant a stratigraphic well next year in EP 200/207

RECAP - FOCUS AREAS FOR BLUE

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CORPORATE RESERVES AND RESOURCES

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ATP814P	Sapphire	9/10/2023	SPE/PRMS Det	NSAI	-	171.2	90.7	251.7	287.0	256.0
ATP814P	Central	31/07/2023	SPE/PRMS Det	NSAI	-	39		111		469
ATP814P	Monslatt	8/12/2015	SPE/PRMS Det	NSAI	-	-	-	619	-	2,054
ATP814P	Lancewood	31/07/2023	SPE/PRMS Det	NSAI	-	203	-	232		573
ATP814P	Hillalong	27/02/2020	SPE/PRMS Det	NSAI	-	-	-	182	-	237
ATP814P	South	29/07/2013	SPE/PRMS Det	NSAI	-	15	-	27	6	30
Total (PJ)					•	518	91	1,617	293	4,017



BIUERGY



BACKGROUND SLIDES THE ROLE OF GAS

Industry

Fertiliser

Methanol

Cement

Plastics

Economic

Hydrogen

Glass/Bricks

Process Heat

Pharmaceuticals

GAS ISN'T JUST ABOUT ELECTRICITY WHY GAS IS CRITICAL?

Natural Gas

CH₄ <u>Power</u>

Base Load electricity

Peaking generation– quick start

Back up for solar and wind

Blue Hydrogen (lowest cost Hydrogen gen)

Domestic

Heating

Cooking



GAS HAS NO SUBSTITUTE FOR MANY INDUSTRIES

Figure 87: Process temperature by industrial sector



Source: Australian Renewable Energy Agency; Rystad Energy

AUSTRALIA'S NET ZERO TARGET THE PENNY DROPS – GAS IS VITAL – AS TIMELINES MEET REALITY

A heavier hand to hit green target: Treasurer Dr Jim Chalmers Speaking at The Australian-Melbourne Institute Economic and Social Outlook conference 2/11/23

Dr Jim Chalmers has warned Australia <u>cannot meet its net-zero</u> <u>emissions targets</u> without more robust interventions from government, paving the way for a new hands-on industry policy with bigger subsidies for companies helping fuel the green energy revolution.

"Without more decisive action, across all levels of government, working with investors, industry and communities, <u>the energy</u> <u>transition could fall short of what the country needs</u>."

EXCLUSIVE

A heavier hand to hit green target: Chalmers

By TOM DUSEVIC, PATRICK COMMINS

08:15 NOVEMBER 2, 2023



Treasurer Jim Chalmers. Picture: NCA NewsWire / Martin Ollman

BUT IT LOOKS LIKE THE REST OF THE WORLD ISN'T BUYING INTO IT

B C E N E R G Y

environment programme



Production Gap Report 2023

Key Findings

"Governments, in aggregate, still plan to produce more than double the amount of fossil fuels in 2030 than would be consistent with limiting warming to 1.5°C. The persistence of the global production gap puts a well-managed and equitable energy transition at risk."

"Taken together, government plans and projections would lead to an increase in global coal production until 2030, and in global oil and gas production until at least 2050. This conflicts with government commitments under the Paris Agreement, and clashes with expectations that global demand for coal, oil, and gas will peak within this decade even without new policies."



SEI, Climate Analytics, E3G, IISD, and UNEP. (2023). The Production Gap: Phasing down or phasing up? Top fossil fuel producers plan even more extraction despite climate promises. Stockholm Environment Institute, Climate Analytics, E3G, International Institute for Sustainable Development and United Nations Environment Programme. https://doi.org/10.51414/sei2023.050

SEVERAL GOVERNMENTS UNDERSTAND THAT THEIR COMPLEX SOCIETIES NEED FOSSIL FUELS



phasing up? Top fossil fuel producers plan even more extraction despite climate promises. Stockholm Environment Institute, Climate Analytics, E3G, International Institute for Sustainable Development and United Nations Environment Programme. https://doi.org/10.51414/sei2023.050

Production Gap Report 2023



THE DEVELOPED WORLD IS EMBARKING ON A "NET ZERO" PATH BECAUSE OF THE "CLIMATE CRISIS"

BUT... HAS THE PROBLEM BEEN FRAMED CORRECTLY?

... WHAT ARE THE METRICS OF THIS "CLIMATE CRISIS"?



Global annual death rate from natural disasters has dropped by 90% since 1920But that's Good!

NASA says the planet has "greened" significantly in the last 20 years – due to CO2 Result – increased crop yieldsBut that's Good!





Life expectancy has more than doubled since the Industrial **Revolution in 1850**And that's Good too!

Reconstructed global temperature over the past 420,000 years based on the Vostok ice core from the Antarctica



Petit, J.R., et al., 2001. *Vostok Ice Core Data for 420,000 Years*. IGBP PAGES/World Data Center for Paleoclimatology Data Contribution Series #2001-076. NOAA/NGDC Paleoclimatology Program, Boulder CO, USA.

BUT LET'S SAY CO2 IS THE DEMON



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GLOBAL GAS DEMAND SPLIT BY REGION - INTERNATIONAL GAS UNION

Australia accounts for 1% of global gas demand

- Australia generates 1.9% of global electricity
- More gas is generally used in generation where there is less coal in the energy mix
- Asia has the highest use of coal for electricity
- Our annual emissions reductions will be outstripped by China's weekly increase in coal generation





.... THE IEA SEES THE IMMINENT DEMISE OF OIL AND GAS AS GREATLY EXAGGERATED



IEA forecast global oil demand will remain at 100 million barrels per day out to 2030 then slowly decline to97 million barrels per day by 2050!





Additions of new gas power plants and gas boilers in buildings are slowing; gas demand peaks before 2030 in the STEPS, though gas use in industry continues to increase

Note: bcm = billion cubic metres; AE = advanced economies; EMDE = emerging market and developing economies.

IEA forecast global gas demand to remain steady at around 145,000 PJ pa (4,000 BCM) out to 2050

BUT AEMO SEES LESS GAS FIRED POWER GENERATION AFTER 2025



Source: AEMO GSOO March 2023

AND THE <u>SOUTHERN</u> GAS MARKET MUST RELY ON DIVERTED LNG EXPORTS AND/OR LNG IMPORTATION



GOVERNMENT SEES THE PATH TO NET ZERO AS ELECTRIFICATION - THROUGH A GRID WITH 82% RENEWABLE ENERGY GENERATION

BUT RENEWABLES NEED FIRMING (FORMERLY KNOWN AS BACKUP GENERATION)



- Coal plants coming out of service 2025-2027
- Build out of wind and solar is stalling
- Transmission line expansion facing opposition
- \bigvee No new gas fired generation is on the books
- Hydrogen is at concept stage
- An 82% renewable energy target will need <u>a lot</u> of gas firming
- There is a timing problem between coal gen coming out and there being enough intermittent connected renewables to cover demand Houston – we may have a problem!

