

20th December 2021

Empire Energy Group Limited

C-2H drilled; V-section confirms 192m liquids-rich gas

Empire Energy Group Limited (ASX:EEG) is a junior oil and gas producer/explorer, with onshore Northern Territory (NT) and US oil/gas assets. EEG holds the largest tenement position (28.9mn acres) in the highly-prospective Greater McArthur Basin, which includes the Beetaloo Sub-basin, Australia's largest undeveloped gas resource. The NT energy basins are fast developing as crucial strategic sources of liquids-rich gas to meet east coast Australia's future energy security needs and supply Gladstone and Darwin's expanding LNG export terminals, complemented with strong policy/funding support from territory and federal governments. EEG has successfully drilled, cased and suspended its EP187 Carpentaria-2H (C-2H) well. The vertical section intersected ~192m of liquids-rich gas, targeting the Velkerri shale, confirming results from the C-1 well, 11km south. Total C-2H drill costs were on budget at \$11.5mn, with the H section, 1,345m in length, drilled out in just five days, to be stimulated and tested in Q2 2022, targeting the Velkerri B shale. Results from the Carpentaria-2 vertical, the C-2H well and the Charlotte 2D seismic survey will be incorporated into an updated Netherland Sewell and Associates (NSAI) Contingent and Prospective Resources Report expected for release in Q1 2022. EEG is well funded for its next drilling phase, which includes fracture stimulation and flow testing of C-2H scheduled to start in Q2 2022, with \$19mn pending in federal government grants and gross cash of ~A\$30mn in hand. On this basis, EEG's business case is likely to materially progress over the next 12 months.

Business model

Empire Energy Group is focused on maturing its portfolio of onshore, long-life oil and gas fields. The company is actively progressing evaluation activity to support reserve bookings and underpin early gas development opportunities. Success could see first cash flow within 24-36 months (*RaaS estimate*), assisted by LPG liquid "credits". Look-through results from horizontal drilling at adjacent tenements will also help define EEG's development model. EEG's early downstream infrastructure and sales deals aim to speed-up its access to energy markets, which appear increasingly supply-constrained.

Drilling underpins pervasive nature of Velkerri prospectives

The key takeaway from EEG's initial Carpentaria-2 drilling is the consistency of the vertical section results with Carpentaria-1, ~11km south, with ~190m of liquids-rich gas intersected across the four middle Velkerri pay zones (Velkerri A, B, Intra A/B and C), although ~240m deeper, with the resulting higher pressures likely to drive stronger flow rates. EEG has commissioned NSAI to prepare an updated independent resources report, and anticipates a material increase in Contingent Resources, with results expected early in Q1 2022. Petrophysical data collected during the drilling of C-2H is being incorporated into fracture stimulation models ahead of the Q2 2022 fracture stimulation and flow test of C-2H. EEG represents a leveraged exposure to the Beetaloo, with a large acreage footprint; capital cost benefits (noting the comparable capex of C-2H and C-1), strong gas-liquids upside potential and a first-mover advantage leveraging downstream commercial considerations. The next half-year should deliver a number of potentially significant re-rating events, with fresh seismic data and completion of EEG's C-2H flow testing programme to drive a potentially material increase in 2C Contingent Resources to assist with field development planning. Regional Beetaloo Sub-Basin well activities by Santos/Tamboran and Origin/Falcon, targeting the Middle Velkerri shales, are proving equally promising, with preliminary results comparing strongly with commercial shale plays in the US, with Santos/Tamboran due to release initial flow test results from their latest T2H and T3H drill program before year-end.

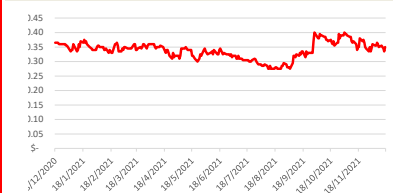
Our mid-point valuation is \$1.04/share (\$622mn)

Our valuation range for EEG is \$400-\$738mn (\$0.64-\$1.19/share), with \$622mn or \$1.04/share at the mid-point. Further look-through results from regional works are to come by end-2021, while EEG's next phase of drilling and seismic have the potential to materially increase 2P+2C volumes and better define recovery economics to crystallise our asset valuation range.

Share Details

ASX code	EEG
Share price (17-Dec)	\$0.35
Market capitalisation	\$210M
Shares on issue	600.1M
Net cash (at 27-Oct)	~A\$22M
Gross cash (at 27-Oct)	~A\$30M

Share Price Performance (12-months)



Upside Case

- EP187 programmes accelerate and underpin a substantial Beetaloo business case
- Look-through success provides independent validation of the commercial model
- EEG drilling success generates high-value, long-term strategic partnerships and funding options

Downside Case

- Gas rates are sub-commercial, negatively impacting regional permit values
- Additional equity financing becomes highly dilutive to per-share growth opportunities
- Gas success in NT/Qld puts downward pressure on domestic gas prices, raising the commercialisation threshold

Board of Directors

Alex Underwood	Managing Director/CEO
Paul Espie AO	Non-Executive Chairman
Dr John Warburton	Non-Executive Director
Peter Cleary	Non-Executive Director
Louis Rozman	Non-Executive Director
Paul Fudge	Non-Executive Director
Jacqui Clarke	Alternate Director

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FINANCIAL SERVICES GUIDE

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AFSL 456663

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- how we transact with you
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