

Cashed up – next stop FID

Empire Energy Group Limited (ASX:EEG) is an oil and gas producer/developer, with onshore Northern Territory (NT) and US oil/gas production assets. EEG has the largest tenement position in the highly prospective Greater McArthur Basin, which includes the Beetaloo Sub-basin. The investment case is building with the development model becoming more defined after the completion of the Carpentaria-3H testing campaign. FEED activity is progressing and the company remains on track for a project sanction within the next few months subject to the requisite regulatory approvals. NT gas continues to firm as a realistic option at scale for east coast Australia's future domestic requirements; growing Gladstone LNG ullage; and as a potential supply source for Darwin's LNG export opportunities. The remainder of 2023 will see more activity across the Beetaloo play in total and commercial success at any scale has beneficial look-through impacts for all Beetaloo ventures... 'a rising tide lifts all boats'. We maintain our view of EEG as the low-cost, strongly-leveraged exposure in the play, holding a significant early-mover advantage to deliver high calorific/low CO₂ gas. EEG is the pure, independent and leveraged exposure to the NT gas opportunities; and in our view, is firmly on the development pathway.

Business model

Empire Energy Group Limited (ASX:EEG), is an oil and gas development and production company, heading towards a project sanction on its Carpentaria Pilot Project in the world-class McArthur-Beetaloo basins. The disconnect between the demand constrained gas market and share prices continues to be highlighted by rising contract prices with we believe, a recent east coast supply deal set at around \$18/gj (anecdotal/unconfirmed). There is a material commercial prize to be won particularly defining a clear timeline to production. In that regard Empire should be considered as being in a pre-development phase, with a significant head-start over peer group options. With a cash balance of \$29.3mn (30-Oct), the company is well funded to maintain its accelerated path to first gas. Beneficially, Empire holds its licences at 100% providing the ability to control project timing and provide financing options through partnering.

Fields works have delivered - now to progress the FEED

We see Empire Energy as the most advanced of the Beetaloo plays having perhaps a six-to-12 months' head start to first gas over its Beetaloo peers. Testing evaluation has supported the operational fundamentals although in some respects the well design (including fracking) is not yet fully defined. The company is making material progress on the FEED aspects of the proposed pilot projecting a sanction point with-in the next few months. The path to scale and growth begins with the first PJ and cashflow can be a game changer. Market pricing of listed gas plays appears uncoupled from the strongly supportive commercial operating environment and this is a situation that is invariably attractive to corporate M&A activity. In the absence of market re-ratings, corporate consolidation inevitably occurs. Companies in production with a growth outlook will look increasingly attractive to investors and other industry operators.

Closing the valuation gap – a FID is a good place to start

We maintain our valuation and note upcoming re-rating events especially, a project sanction for the Carpentaria Pilot Project that could be delivered within the next few months subject to regulatory approvals. We model a base-case (mid-point) valuation of \$903mn (\$1.17/share) with an upside case to \$1.54/share. The success case at Carpentaria continues to build and could deliver valuation upside well in excess of our base case such is the nature and attraction of gas plays in the proof-of-concept phase. There is likely to be no better time than now to progress and deliver gas projects.

Energy

2 November 2023

Share Details

ASX code	EEG
Share price (1 Nov)	\$0.125
Market capitalisation	\$108M
Shares on issue	773M
Cash (30-Oct)	\$29.3M
Free float	~49.5%

Share Performance (12 months)



Upside Case

- Further definition and acceleration of the early-production opportunity.
- Securing a binding off-take agreement and/or a farm-in partner to offset market perceptions of future material equity dilution.
- Delivering FID - this defines an initial NPV for Beetaloo gas.

Downside Case

- Capex inflation impacts project returns potentially slowing progress to first gas.
- Stronger financing reliance through equity issues resulting in excessive share dilution.
- Slower progress through FEED and delays to the timing of FID, expected in the next few months.

Board of Directors

Alex Underwood	Managing Director / CEO
Peter Cleary	Chair
Dr John Warburton	Non-Executive Director
Louis Rozman	Non-Executive Director
Paul Fudge	Non-Executive Director

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Data In The Zone...Heading To The Carpentaria FID Pointy End

We point to our Update note of 12-Sep (“[More flow data equals more confidence](#)”) referencing the progress of testing from the Carpentaria gas play (C-3H in particular). We maintain our view that the testing and evaluation data continues to underpin the commercial case for an early gas development option. In practical terms, we suggest the company can be considered to be in a pre-development phase.

Exhibit 1: Like a duck swimming...the hard work and progress is under the surface

Operations

Carpentaria-3H (C-3H)

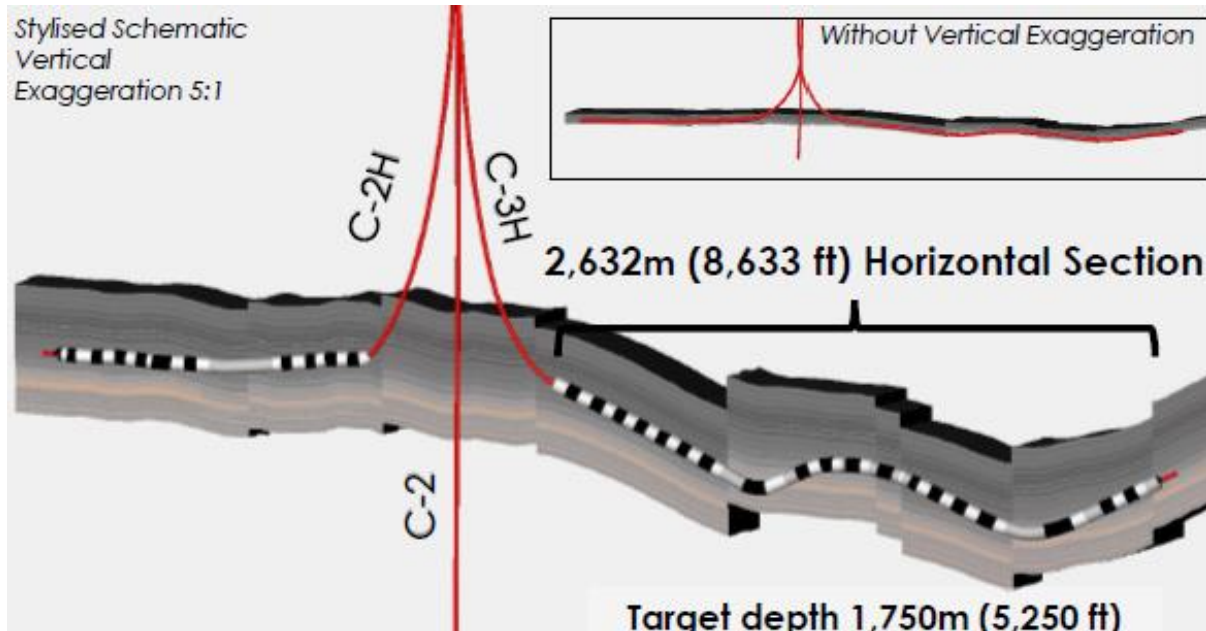
The well has been shut-in after completing extended testing, delivering an IP90 rate of 3.1TJd

The well was shut-in in early-Oct after some 63 days of second phase testing, post a five month period of soaking.

Results during the second phase were encouraging, delivering an IP30 rate of 3.8TJd across the 40 stage stimulated section. The implied IP90 rate using the results from both testing phases was determined to be 3.1TJd achieving the required objectives from the programme.

Data related to frack contribution is being compiled noting the well (similarly to C-2H) was stimulated using a number of different styles. These analyses will better define the optimal fracking method for the pilot project.

The C-2H and -3H wells could be included as a production pair in the planning for the proposed Carpentaria production pilot, scheduled to reach FID in the coming months.



Corporate

As indicated, material progress is reported on the FEED works for the proposed 25TJd pilot project.

Field development planning - progressing well designs and the site and layout of surface facilities

Pipeline access agreements (self explanatory);

Gas sales marketing - we suggest, offtake should not be an issue given the concerns around future Blacktip gas supply and rising crude oil/diesel prices;

All requisite regulatory approvals - the timing of receipt of approvals is likely the most uncertain element in the process; and

Project financing - there are a number of options being considered and evaluated.

Initial agreement signed with APA group

On 8-Aug EEG and APA executed a complementary agreement to the MOU signed in Oct-2021, for “...the establishment of midstream gas infrastructure and proposed long-form agreements”

APA will spend up to \$5mn on engineering and design studies for infrastructure facilities associated with the proposed 25TJd pilot project; and may fund the gas facilities under a partnering agreement.

Financing position remains comfortable - more than sufficient to deliver FID in our view.

EEG holds a cash balance of \$15.1mn (as at 30-Sep) and subsequent to the reporting period received a \$15.6mn R&D Tax Offset. Cash at 30-Oct was reported at \$29.3mn with \$5.8mn in undrawn debt facilities. As at 30-Sep, debt stood at \$15.2mn.

Source: Company data; RaaS commentary

Recapping the status of Carpentaria progress – end Oct-2023

EEG has delivered:

- ✓ Confirmation of the critical commercial flow rates;
- ✓ Material upgrades in contingent resources with estimates of the EUR range based on flow rate testing data and the number of ‘well locations’ required to support the development of the gas resources;
- ✓ Completion of testing at C-3H which has demonstrated / confirmed the operational benefits of the soaking process. The campaign delivered an IP90 rate of 3.1TJd.

In progress:

- Front End Engineering & Design (“FEED”) is continuing: including engineering, economic modelling, preliminary costings for both capex and opex for an **early-stage development (up to 25 TJ/d) – with the potential to generate \$110-137mn pa of sales revenue per annum in a \$12-15/gj market;**
- ❖ *We note the agreements with APA Group on facilities design and potential financing options*
- Subsurface design planning (*finalising well and fracking designs*). Attribution analyses are continuing;
- Securing gas sales and transportation agreements (*discussions ongoing with multiple parties*);
- Financing for pilot (Macquarie Bank credit facility already in place and Empire has commenced discussions with potential JV partners);
- Obtain government approvals: NT Petroleum Production Licence. A Carpentaria development will largely be the first practical test of the regulatory process and as such can be considered as holding some intrinsic timing uncertainty. The NT Government is reportedly keen to see new projects progress and as such, we suggest are likely to be highly co-operative, however, it also will want to ensure the process is properly and thoroughly adhered to;
- Negotiate Northern Land Council (“NLC”) Production Agreement.

The company is targeting a project sanction on a first-stage project within the next few months, subject to requisite regulatory approvals being received.

We acknowledge that the data to hand can still be considered to be somewhat preliminary in nature – the well design (including stimulation programmes) is not fully defined, the number of completed and tested wells is limited and the implied outputs from horizontal completions have been extrapolated.

But we believe the error envelope around the data is shrinking and the commercial case is becoming more robust.

Gas supply remains tight – to put it simply ‘more gas is required’

Whilst there are still remaining geological and engineering challenges to be overcome, there is a **quantum gas opportunity** associated with the Beetaloo Basin that is there to be won.

Industry noise indicates a bullish market for suppliers and we are aware (at least anecdotally) that pricing negotiations are ranging up to \$18/gj in a clear signal, gas is still required and is hard to source.

We are confident that the Beetaloo will evolve into a material (transformational) future supplier of gas into domestic (east coast) and export markets – the Velkerri and Kyalla target zones are regionally pervasive and geologically consistent and in broad terms what works in one area is highly likely to work in others.

In this regard the Beetaloo represents another regional unconventional play that can and probably will be developed like the US onshore analogues, in terms of scale. **But it has to start with the first PJ and herein we suggest that EEG has the operational head-start.**

EEG remains our preferred exposure to the play – it is lower cost, more advanced towards first cash-flow, with phased growth opportunities and more highly leveraged to the success case.

Importantly, on its likely capital and operating cost profile, the company can be considered as holding a unique advantage to market gas across a range of offtake terms and individual gas users.

Exhibit 2: Financial Summary

EMPIRE ENERGY GROUP LTD		EEG							
YEAR END		Dec							
NAV	A\$mnn	\$1.17							
SHARE PRICE	A\$cps	\$0.125		priced as of close trading		1-Nov			
MARKET CAP	A\$mnn	97							
ORDINARY SHARES	M	773							
OPTIONS	M	10							
COMMODITY ASSUMPTIONS									
		2021	2022	2023E	2024E				
Realised oil price	US\$/b	67.98	94.25	73.93	70.20				
Realised gas price	US\$/mcf	3.72	6.42	3.01	3.53				
Exchange Rate	A\$:US\$	0.7514	0.6946	0.6745	0.6773				
NET PRODUCTION									
		2021	2022	2023E	2024E				
Crude Oil	kb	2	2	2	2				
Nat Gas	mmcf	1,676	1,727	1,727	1,640				
TOTAL	kboe	282	290	290	275				
RATIO ANALYSIS									
		2021	2022	2023E	2024E				
Shares Outstanding	M	612	773	773	873				
EPS (pre sig items)	UScps	(2.41)	(0.86)	(0.54)	(0.41)				
EPS	Acps	(2.41)	(0.86)	(0.54)	(0.41)				
PER	x	na	na	na	na				
OCFPS	Acps	(5.35)	9.50	32.29	1.38				
CFR	x	na	na	na	na				
DPS	Acps	na	na	na	na				
Dividend Yield	%								
BVPS	Acps	23.8	24.9	25.1	23.3				
Price/Book	x		0.5x	0.5x	0.5x				
ROE	%		na	na	na				
ROA	%		na	na	na				
(Trailing) Debt/Cash	x								
Interest Cover	x								
Gross Profit/share	Acps	5.7	10.0	3.7	4.3				
EBITDAX	A\$m	3.0	6.8	3.8	4.5				
EBITDAX Ratio	%								
EARNINGS									
	A\$000s	2021	2022	2023E	2024E				
Revenue		8,502	13,722	8,454	9,258				
Cost of sales		(5,005)	(5,961)	(5,595)	(5,477)				
Gross Profit		3,497	7,762	2,859	3,781				
Other revenue									
Other income		1,606	259	297	300				
Exploration written off									
Finance costs		(568)	(2,259)	(709)	(1,089)				
Impairment		0	(2,705)	0	0				
Other expenses		(14,332)	(13,526)	(6,867)	(7,223)				
EBIT		(11,305)	1,222	(2,887)	(1,564)				
Profit before tax		(10,835)	(5,765)	(4,008)	(3,442)				
Taxes		(213)	(239)	(200)	(172)				
NPAT Reported		(11,048)	(6,003)	(4,208)	(3,614)				
Underlying Adjustments		0	0	0	0				
NPAT Underlying		(11,048)	(6,003)	(4,208)	(3,614)				
CASHFLOW									
	A\$000s	2021	2022	2023E	2024E				
Operational Cash Flow		(7,044)	(9,305)	9,100	8,938				
Net Interest		(568)	(679)	(478)	(738)				
Taxes Paid		(213)	(239)	(120)	(250)				
Other									
Net Operating Cashflow		(2,460)	5,100	16,835	817				
Exploration		(11,228)	(37,356)	(20,000)	(10,000)				
PP&E		(250)	0	(250)	(500)				
Petroleum Assets		(12,965)	0	0	0				
Net Asset Sales/other		0	0	0	0				
Net Investing Cashflow		(24,443)	(37,586)	(20,350)	(10,500)				
Dividends Paid									
Net Debt Drawdown		(817)	(1,035)	(8,313)	(850)				
Equity Issues/(Buyback)		39,359	29,412	0	19,000				
Other									
Net Financing Cashflow		38,542	28,377	(8,313)	18,150				
Net Change in Cash		11,639	(4,109)	(11,828)	8,467				
BALANCE SHEET									
	A\$000s	2,021	2,022	2023E	2024E				
Cash & Equivalents		25,650	21,880	12,263	20,730				
O&G Properties		34,900	36,612	57,008	67,508				
PPE + ROU Assets		1,306	1,608	250	500				
Total Assets		158,823	197,650	197,383	216,680				
Debt		8,027	7,823	7,310	6,499				
Total Liabilities		49,502	64,043	66,531	79,083				
Total Net Assets/Equity		109,320	133,608	130,851	137,597				
Net Cash/(Debt)		17,622	14,057	4,953	14,231				
Gearing dn/(dn+e)									
RESOURCES and RESERVES									
		Contingent Resources			Prospective Resources				
		1C	2C	3C	1U	2U	3U		
Northern Territory									
EP 187									
Carpentaria					566	1,282	2,284		
East Carpentaria					1,020	1,878	3,782		
South Carpentaria					204	383	668		
TOTAL PJ					1,790	3,543	6,734		
Carpentaria									
Velkerri C		113	666	846					
Velkerri B		120	678	844					
Intra Velkerri A/B			8	16					
Velkerri A/B			12	24					
TOTAL PJ		233	1,364	1,730					
Carpentaria East									
Velkerri C		35	185	871					
Velkerri B		36	190	906					
Intra Velkerri A/B									
Velkerri A/B									
TOTAL PJ		71	375	1,777					
Aggregate PJ		304	1,739	3,507					
US Onshore									
Gas (bcf)		28	38	42					
EQUITY VALUATION									
	A\$mnn	Risked Range			Low	Mid	High		
		Low	Mid	High	A\$/share				
Northern Territory									
EP-187									
Scenario Weighting		720	770	938	\$0.93	\$1.00	\$1.21		
Prospective Resources		41	103	215	\$0.05	\$0.13	\$0.28		
US Onshore									
Appalachian		24	31	37	\$0.03	\$0.04	\$0.05		
TOTAL		785	904	1,189	\$1.02	\$1.17	\$1.54		
Net cash/(debt)		8							
Corporate costs		(9)							
TOTAL		784	903	1,188	\$1.01	\$1.17	\$1.54		
Shares on issue (mn)		773 mn							

Source: RaaS Advisory, company data



FINANCIAL SERVICES GUIDE

RaaS Advisory Pty Ltd

ABN 99 614 783 363

Corporate Authorised Representative, number 1248415

of

BR SECURITIES AUSTRALIA PTY LTD

ABN 92 168 734 530

AFSL 456663

Effective Date: 6th May 2021

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- how we transact with you
- how we are paid, and
- complaint processes

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