Empire Energy Group Ltd

Update Report

Getting close to the FID pointy end

Energy

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 continues to build with a FID point on the Carpentaria Pilot Project tantalisingly close. FEED activity continues to progress, building on the game-changing acquisition of the Rosalind Park Gas Plant which should provide an immediate, low-capital and operating-cost processing option with nameplate capacity above the Stage I development model. We suggest a project sanction could be delivered Q1 CY24 subject to the requisite regulatory approvals. NT gas supply requires critical firming on Blacktip production issues and concerns with regard to east coast grid stability emerging through the summer period. Quite simply, more gas supply at scale is required for domestic requirements, growing Gladstone LNG ullage, and as a potential supply source for Darwin's LNG export opportunities. A FID success case could see construction begin at Carpentaria through H2 CY24 with first gas in 2025. Success at any scale has beneficial look-through impacts for all Beetaloo ventures…'a rising tide lifts all boats'. We see EEG as the low-cost, strongly-leveraged exposure in the play, with a significant early-mover advantage to deliver high-calorific/low-CO_2 gas. EEG is, in our view, firmly on the development pathway.

Business model

Empire Energy Group Limited (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 prices well in excess of legacy contracts and spot market rates. 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 total available financing of $22.7mn (31-Dec), 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.

A new year means the FID light is shining in the near distance

Having secured the 'game changer' through the purchase of the Rosalind Park Gas Plant, attention moves towards completing the final pieces of the FEED study. The company is targeting a February submission date for environmental and other regulatory approvals whilst continuing with operational agreements (pipeline and field designs) and financing options. The success case would see construction commence in H2 CY24 and first gas in the early part of 2025…project definition can drive a material rerating for EEG. The path to scale and growth begins with the first PJ and cash flow can be a game changer – importantly, EEG is now in this zone.

Defining the commercial case can close the valuation gap

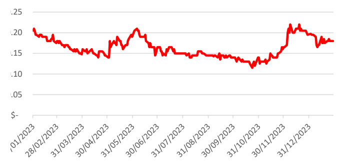
The market pricing of listed gas plays appears uncoupled from the commercial operating environment and this is a situation that is invariably attractive to corporate M&A activity, particularly as development opportunities emerge and resources are de-risked. Companies in production with a growth outlook will look increasingly attractive to investors and other industry operators. We model a base-case (mid-point) valuation of $903mn ($1.17/share) with an upside case to $1.52/share. We note the impending re-rating events and reiterate that there is no better time than now to progress and deliver gas projects.

29 January 2024

Share Details

ASX code	EEG
Share price (intraday)	$0.18
Market capitalisation	$139M
Shares on issue	773M
Cash (31-Dec)	$17.3M
Free float	~49.5%

Share Performance (12 months)



Upside Case

- Continuing 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 would push back the timing of first gas

Board of Directors

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

Company Contacts

Alex Underwood +61 2 9251 1846

info@empiregp.net

RaaS Contacts

Andrew Williams +61 417 880 680

andrew.williams@raasgroup.com

Finola Burke* +61 414 354 712

finola.burke@raasgroup.com

***Analyst holds shares**

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Not There Yet But Feels Like Carpentaria Is On The Last Lap

Empire's latest quarterly outlined material progress being made towards the project sanction point for the Carpentaria Pilot Project, which now feels tantalising close.

It's worth reiterating the critical impact the recent purchase of the Rosalind Park Gas Plant from AGL has had on scoping works for Carpentaria (*refer* ***RaaS Update note 6-Dec-2023***).

The plant had become available with the progressive shut-down and abandonment of AGL's Camden CSG Project south of Sydney and at a purchase price of $2.5mn (cash), well under replacement value, it most certainly looks to be a game changer on capital costs and timing to first gas.

The plant has a nameplate capacity of 42TJd, well in excess of the notional Carpentaria Project Phase I target of 25TJd and, therefore, **provides organic expansion capacity** that can be accessed rapidly.

EEG has indicated that the acquisition of the Rosalind Plant "…may result in >$30mn in cost savings and reduce lead time to first gas by ~12 months" compared to new-build options.

The pilot project is steadily progressing to the FID (sanction) point, with the company targeting submission of regulatory and indigenous approvals in February and a formal FID in the current quarter, on the success case and naturally subject to timely receipt of regulatory approvals.

The remaining FEED (design) works include:

- **Gas sales agreements** – negotiations are continuing, with some reasonable impetus given the supply issues at the Blacktip Gas Field;
- **Design optimisation** – frack style and field development layout and location;
- **Pipeline access; and**
- **Financing** that may include partnering or early gas sales.

The success case would see construction commence from mid-2024 and first gas in early(ish) 2025 (RaaS estimate).

…FEED moves to FID moves to ordering long lead time items and construction – FID means the project is **real and very tangible.**

Financing is always an issue for companies with no existing cash-flow base. The Rosalind plant saves significant capital but final financing may yet still be a mix of partnering, debt and equity.

The company reports total available financing as at 31-Dec of $22.7mn post the receipt of a $15.6mn R&D Tax Offset payment, which should comfortably cover the remaining cost outgoings to FID.

EEG remains our preferred exposure to the play – it is lower cost, more advanced towards first cash flow, with phased growth opportunities and higher leverage 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.

To put it simply, **EEG ticks more boxes:**

- **More advanced in terms of the practical field model** (more wells with greater concentration AND has the only horizontal completion nearing 3,000m) – there is just more 'certainty' around the gas data;
- **A defined gas processing option with the intrinsic upside potential of output capacity well in excess of Phase I targets** – in this regard the initial project will more likely be limited by well deliverability, not throughput capacity;
- **Scaling the economics** – start incrementally (up to 25TJd) to provide initial cash flow and independent financing which acts operationally as a quasi-commissioning for a bigger development option;
- **Lower well costs** equal better well economics; and
- Approaching **FID -** anticipated to be delivered in Q1CY24 subject to NT regulatory approvals.

Exhibit 1: A consolidation quarter focussed on progressing Carpentaria to FID

Operations	
Carpentaria-3H (C-3H)	The well was shut-in on 5-Oct after some 63 days of second-phase testing, post a five-month period of soaking, 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.
	Both the C-2H and -3H wells are being reviewed internally and independently on a fracking optimisation basis with the company reporting it has *"…identified several opportunities for operational improvements for future wells"*. The pilot project will likely involve the drilling of two development wells with completions utilising the results of the current technical reviews.
Corporate	
*refer **RaaS 2024 Outlook Interview, published 23-Jan-2024***	
FEED activity is progressing	**Field development planning** - progressing well designs and the site and layout of surface facilities: **Gas sales marketing** – discussions are underway with strong interest in offtake across the eastern states gas markets, from as far south as Melbourne which underscores the still critically constrained nature of gas supply on a national basis. We suggest securing sales agreements should not be an issue given the obvious and growing concerns around supply stability both along the east coast and in the NT where Blacktip production rates are critically low. Management expects it can finalise an agreement in the short-term, which would have positive implications in assessing and progressing financing options. **Pipeline access agreements**: All **requisite regulatory approvals** – the Environmental Management Plan and other regulatory submissions could be lodged in February. We add that the timing of receipt of approvals is likely to remain the most uncertain element in the process. **Project financing** – there are a number of options being considered and evaluated including the *'…launch of a formal JV partnering process'*.
Financing position remains comfortable – more than sufficient to deliver FID in our view	EEG holds a cash balance of $17.3mn (as at 31-Dec) after receiving a $15.6mn R&D Tax Offset payment and reducing its debt position. As at the end of the period, total financing facilities stood at $22.7mn.

Period Ending	**31-Dec-2023**	**30-Sep-2023**
Cash (A$mn)	17.3	15.0
Debt (A$mn)	(8.8)	(15.1)
Net debt (A$mn)	**8.5**	**(<0.1)**

Source: Company data; *RaaS commentary*

Closing the value gap will start with FID

Our valuation remains unchanged as it is predominantly based on a nominal unit gas (NPV) value, which will be subject to adjustment as further pricing indicators come to hand.

We do highlight from the ACCC report (*Interim update on east coast market* - Dec-2023) commentary related to producer offers made between February and August 2023 for 2024 supply:

"Average prices for producer offers were similar to those offered in the first half of 2022. Producer offers ranged from $10.49/GJ to $18.20/GJ."

…and would add recent commentary from Cooper Energy that the extension of a supply contract with Visy Glass was negotiated within the range as modelled by the ACCC. The range is broad but we suggest the deal was struck at the top end and anecdotally, other current gas pricing discussions in the sector are being conducted at the higher end of the range as a starting point.

The Carpentaria project is still in FEED and, critically, gas sales discussions although close to completion are yet to be finalised. There is insufficient detail yet to define a Carpentaria Phase I model and the look-through implications for the remainder of that development area, but indicative (speculative) estimates suggest the value opportunity lies to the upside of our current assumptions.

The critical underlying assumption to our NAV continues to be gas price.

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.

Defining the Carpentaria model should deliver a material and tangible unit NPV and, more importantly, provide a working look through to the remainder of the resource base…the multiplier impact could be transformational, even allowing for financing dilution through partnering or equity markets.

The potential for an equity raise likely overhangs the stock, as it does for almost all of the small gas players in the current market, so finalisation of capex and financing will be critical events and expected in the next couple of months.

We would strongly highlight though that EEG has been quite diligent in constraining its recourse to equity markets, noting since July-2021 EEG has raised c.$70mn in equity (about 20% of other play participants) whilst progressing proof-of-concept to project (assuming success) on an accelerated basis in comparison to peers.

Paradoxically, whilst the Beetaloo gas options commenced well back in the supply time-line, in an infrastructure-light environment with no clear path to market and no commercial flow rates, we could be approaching a point where ‘next gas’ comes from the NT versus QLD and NSW options where progress has been glacial.

Exhibit 2: Financial Summary

EMPIRE ENERGY GROUP LTD		EEG		
YEAR END		Dec		
NAV	A$mn	$1.17		
SHARE PRICE	A$cps	$0.18	intraday	29-Jan
MARKET CAP	A$mn	139		
ORDINARY SHARES	M	773		
OPTIONS	M	10		

nm = not meaningful
na = not applicable

COMMODITY ASSUMPTIONS		2021	2022	2023E	2024E
Realised oil price	US$/b	67.98	94.25	77.64	72.46
Realised gas price	US$/mcf	3.72	6.42	2.58	2.72
Exchange Rate	A$:US$	0.7514	0.6946	0.6657	0.6738

RATIO ANALYSIS		2021	2022	2023E	2024E
Shares Outstanding	M	612	773	773	873
EPS (pre sig items)	UScps	(2.41)	(0.86)	(0.38)	(0.43)
EPS	Acps	(2.41)	(0.86)	(0.38)	(0.43)
PER	x	na	na	na	na
OCFPS	Acps	(5.35)	9.50	39.77	(4.86)
CFR	x	na	na	na	na
DPS	Acps	na	na	na	na
Dividend Yield	%				
BVPS	Acps	23.8	24.9	25.2	23.2
Price/Book	x		0.7x	0.7x	0.8x
ROE	%		na	na	na
ROA	%		na	na	na
(Trailing) Debt/Cash	x				
Interest Cover	x				
Gross Profit/share	Acps	5.7	10.0	6.8	4.3
EBITDAX	A$M	3.0	6.8	6.2	4.5
EBITDAX Ratio	%				

EARNINGS	A$000s	2021	2022	2023E	2024E
Revenue		8,502	13,722	7,550	6,050
Cost of sales		(5,005)	(5,961)	(2,280)	(2,286)
Gross Profit		**3,497**	**7,762**	**5,270**	**3,764**
Other revenue					
Other income		1,606	259	300	300
Exploration written off					
Finance costs		(568)	(2,259)	(1,808)	(1,093)
Impairment		0	(2,705)	0	0
Other expenses		(14,332)	(13,526)	6,169	4,463
EBIT		(11,305)	1,222	1,508	793
Profit before tax		**(10,835)**	**(5,765)**	**(2,772)**	**(3,494)**
Taxes		(213)	(239)	(200)	(252)
NPAT Reported		**(11,048)**	**(6,003)**	**(2,972)**	**(3,746)**
Underlying Adjustments		0	0	0	0
NPAT Underlying		**(11,048)**	**(6,003)**	**(2,972)**	**(3,746)**

CASHFLOW	A$000s	2021	2022	2023E	2024E
Operational Cash Flow		**(7,044)**	**(9,305)**	**7,845**	**5,954**
Net Interest		(568)	(679)	(1,204)	(737)
Taxes Paid		(213)	(239)	(225)	(250)
Other					
Net Operating Cashflow		**(2,460)**	**5,100**	**20,470**	**(2,861)**
Exploration		(11,228)	(37,356)	(24,818)	(10,000)
PP&E		(250)	0	(2,899)	(500)
Petroleum Assets		(12,965)	0	0	0
Net Asset Sales/other		0	0	0	0
Net Investing Cashflow		**(24,443)**	**(37,586)**	**(27,727)**	**(10,500)**
Dividends Paid					
Net Debt Drawdown		(817)	(1,035)	999	(850)
Equity Issues/(Buyback)		39,359	29,412	0	19,000
Other					
Net Financing Cashflow		**38,542**	**28,377**	**391**	**18,150**
Net Change in Cash		**11,639**	**(4,109)**	**(6,866)**	**4,789**

BALANCE SHEET	A$000s	2021	2022	2023E	2024E
Cash & Equivalents		25,650	21,880	17,310	22,098
O&G Properties		34,900	36,612	61,657	72,157
PPE + ROU Assets		1,306	1,608	250	500
Total Assets		**158,823**	**197,650**	**179,180**	**182,918**
Debt		8,027	7,823	7,303	6,487
Total Liabilities		**49,502**	**64,043**	**49,303**	**46,428**
Total Net Assets/Equity		**109,320**	**133,608**	**129,877**	**136,490**
Net Cash/(Debt)		17,622	14,057	10,006	15,612
Gearing dn/(dn+e)					

NET PRODUCTION		2021	2022	2023E	2024E
Crude Oil	kb	2	2	3	2
Nat Gas	mmcf	1,676	1,727	1,727	1,304
TOTAL	**kboe**	**282**	**290**	**291**	**220**
Product Revenue	A$mn	8.5	13.7	7.5	6.1
Cash Costs	A$mn	(5.0)	(6.0)	(2.3)	(2.3)
Ave Price Realised	A$/boe	30.17	47.32	25.99	27.54
Cash Costs	A$/boe	(17.76)	(20.55)	(7.85)	(10.41)
Cash Margin		**12.41**	**26.76**	**18.14**	**17.13**

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 Velerri 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 Velerri 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	Risked Range			Low	Mid	High
A$mn	Low	Mid	High	A$/share		
Northern Territory						
EP-187						
Scenario Weighting	720	770	928	$0.93	$1.00	$1.20
Prospective Resources	41	103	212	$0.05	$0.13	$0.27
US Onshore						
Appalachian	24	31	37	$0.03	$0.04	$0.05
	785	**904**	**1,177**	**$1.02**	**$1.17**	**$1.52**
Net cash/(debt)		9				
Corporate costs		(9)				
TOTAL	**785**	**903**	**1,176**	**$1.02**	**$1.17**	**$1.52**
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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Contact Details, BR and RaaS

BR Head Office: Suite 5GB, Level 5, 33 Queen Street, Brisbane, QLD, 4000

RaaS. 20 Halls Road Arcadia, NSW 2159

P: +61 414 354712

E: finola.burke@raasgroup.com

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