

Tightness in NT supply enhances the business case

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 NT energy basins are fast developing as strategic high-calorific gas bolsters for east coast Australia's future domestic requirements, growing Gladstone LNG ullage and potential supply for Darwin's expanding LNG export terminals, amid funding support from Territory and Federal governments. Gas reserves issues at the Blacktip field have been compounded by recent unsuccessful in-fill drilling. There is a growing supply shortfall with limited existing alternative sources of supply, which can only enhance the business case for Beetaloo gas. With field data and upgraded Contingent Resource estimates, EEG is in a prime position to move along the commercialisation pathway, targeting a FID by end-2023 on a 25TJd initial development. With LNG-scale gas potential and a tightening supply situation, EEG continues to represent the strongest leveraged play to the transformational potential of the NT basins – we suggest market opportunity is not going to be the limiting factor to commercial success.

Business model

Empire Energy Group Limited (EEG) is an oil and gas development and production company, focused on maturing its portfolio of onshore, long-life oil and gas opportunities. The key asset is the substantial tenement holdings across the world-class McArthur-Beetaloo basins in the NT where the latest testing and evaluation data further underpins the commercial case in support of an early gas development option. In practical terms, we suggest the company can be considered to be in a pre-development phase, particularly with stronger regulatory certainty as recently announced. Tightening gas supply issues emphasise the need for new development options at scale and see EEG on an accelerated path to first gas.

Blacktip supply issues highlight the need for new gas options

A recent ASX announcement from Incitec Pivot (ASX:IPL) indicated it had been advised through its gas supplier (NT Power and Water Corporation [NTPWC]) that there were potential reserves issues with the Blacktip Gas Field with a notice of a reduction in forecast supply under the GSA from Jun-2023. The production issues had necessitated NTPWC (and IPL) to source third-party gas but we note alternative NT supply options through the Bayu-Undan Project are becoming increasingly uncertain. Gas production in the NT is mirroring the problems associated with east coast supply...mature fields in decline and a gap in the timing to new development sources. In this context we can see an increasing urgency for new projects in a market short of (relatively cheap) gas. We have indicated in previous notes that EEG's Carpentaria area is delivering gas rates and LNG-scale gas resources that support commerciality and if there were any concerns about offtake potential, the earlier-than-expected supply squeeze would suggest there is an accelerating urgency for new gas options – we don't see the economic potential as being market constrained. We continue to remain confident a first project can be sanctioned around end-2023, with material de-risking across the portfolio across the next 12 months.

The valuation shows the size of the success case

We maintain our base-case (mid-point) valuation at \$916mn (\$1.16/share) with an upside case to \$1.57/share. The success case at Carpentaria continues to build and could deliver further valuation upside well in excess of our base case. The increasing and fast-emerging supply squeeze, if anything, increases our confidence in the economic and commercial case. With further re-rating events to come, a project sanction could be delivered by end-2023.

Energy

8 June 2023

Share Details

ASX code	EEG
Share price (7-Jun)	\$0.20
Market capitalisation	\$158M
Shares on issue	773M
Cash (current)	\$16.3M
Free float	~47%

Share Performance (12-months)



Upside Case

- Success cases at currently evaluating Carpentaria (-2H, -3H and -4V) wells delivering above-expectation testing data
- 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 excess future equity dilution

Downside Case

- Testing results from C-3H fall below expectations
- Capex inflation impacting project returns and potentially slowing progress to first gas
- Continuing financing reliance through equity issues on weaker field data resulting in excessive share dilution

Company Interview

[Empire Energy Group RaaS Interview 5 June 2023](#)

Board of Directors

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

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*Analyst holds shares

Gas Supply Was Always Going To Be Squeezed – And It’s Here Now

The planets are aligning for EEG and Beetaloo Basin gas supply.

With the confirmation of critical commercial flow rates and material upgrades in contingent resources to LNG-scale including first estimates of the EUR range, we are highly confident **the commercial case has been defined.**

With a FID on an initial gas project being targeted for end-2023 for first gas in 2025, one of the critical path items remaining was securing gas sales and transportation agreements.

A point of market conjecture has been whether there was sufficient market (off-take) to justify the scale required for a greenfield, unconventional gas project in the absence of an export option.

We have always been of the opinion that in respect of EEG, gas supply could be high margin and profitable on a phased basis, with a number of start-up supply opportunities that could be aggregated to support an initial production phase of up to 25TJd (9PJ pa).

Problems at Blacktip highlight impending and material NT gas supply shortfall

A recent ASX announcement from Incitec Pivot (ASX:IPL) indicated it had been advised through its gas supplier (NT Power and Water Corporation [NTPWC]) that there were potential reserves issues with the Blacktip Gas Field with a notice of a reduction in forecast supply under the GSA from Jun-2023.

Whilst not good news in an aggregate sense, the news highlighted a potential 50-55TJd immediate shortfall in gas contracted through the NTPWC.

Whilst the shortfall has been made up from the LNG projects in Darwin, we are uncertain as to how long these options can underpin the gap in supply volumes, which in any case would most certainly come at market (LNG netback) pricing.

The NT Government is actively building renewable capacity but the timing and capacity (around 55MW across four projects) are only likely to reduce the shortfall at the margin given magnitude of the supply decline.

Diversification makes less gas supply risk

The production decline needs to be replaced before growth can be delivered.

If anything, from an energy security perspective, we can see the NT Government as being even more supportive and encouraging of additional gas supply projects. Diversity of supply becomes critical when considering issues of energy security.

We believe, as the early mover in the Beetaloo, EEG is best placed to be a provider of material new gas volumes into the region to support the NT Government on a both medium- and long-term basis. It’s worth reiterating, as previously published, there’s still more to come through 2023:

- Return to testing at C-3H;
- Front End Engineering & Design (“FEED”): 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 some \$110-137mn pa of sales revenue per annum in a \$12-15/gj market;**
- Subsurface design planning (*finalising well and fracking designs*);
- **Securing gas sales** and transportation agreements (*discussions ongoing with multiple parties*);
- Financing for pilot (Macquarie Bank credit facility already in place);
- Obtain government approvals: NT Petroleum Production Licence;
- Negotiate Northern Land Council (“NLC”) Production Agreement; and
- FID on a first-stage project by end-2023.

(Timeline and activities outlined as per EEG Managing Director’s AGM presentation (30-May)).

Securing offtake, we suggest, will not be a constraining factor to FID. We speculate that, on potentially strengthening demand, EEG may be able to accelerate growth options above 25TJd.

Potentially stronger demand is another risk unwinding

Remembering that the nominal flow rate threshold for commerciality (on normalisation) has been reached with “...the development well design yet to be optimised”. Field risk is materially lower.

FEED and environmental applications are under way.

The regulatory environment looks set.

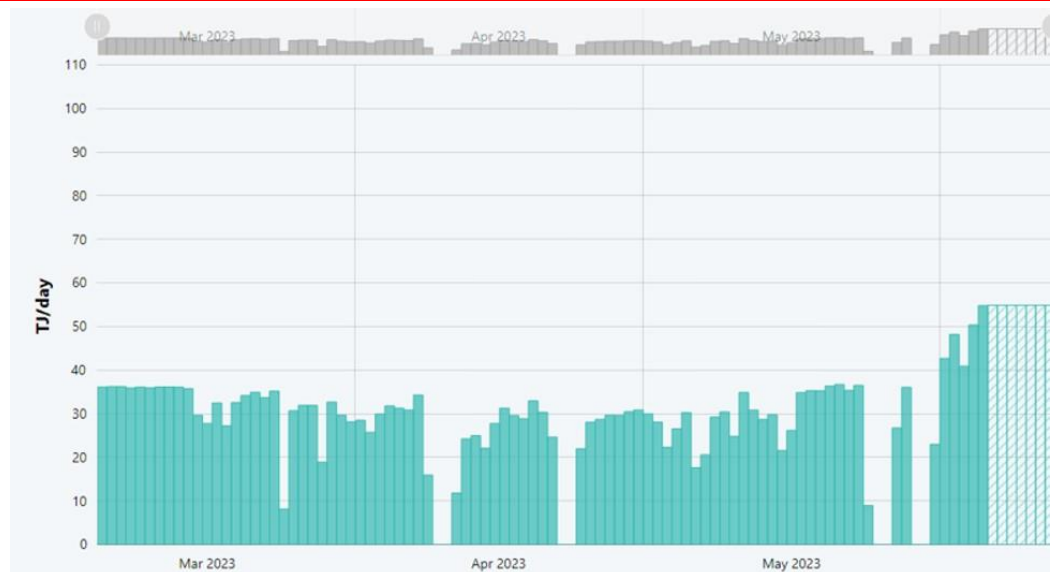
There are always more boxes to tick but in combination with small companies being exempt from gas price restrictions, the pathway (and roadmap) to first gas looks defined.

Blacktip – a quick look

The problems at Blacktip highlight the risks inherent with regions dependent on one major supply hub. This is not unique to the NT – Victoria is heavily dependent on Gippsland Basin supply, NSW and SA are leveraged to Cooper Basin output, with only Queensland somewhat diversified with supply sources from the Cooper, Surat and Bowen Basins.

The NTPWC had entered into a gas supply agreement with Eni Australia (the operator) from the Blacktip gas field, on a 25-year, take-or-pay contract, with supply at the rate of ~105-110TJd through the Yelcherr Gas Processing Plant.

Exhibit 1: Yelcherr output - that's a long way short of 110TJd



Source: AEMO

Eni had alerted NTPWC in May-2022 of serious problems with gas rates, which had decreased by nearly 50% over the course of the year, highlighting the risks with respect to the long-term security of the supply. The NTPWC is using the gas to generate electricity for the Darwin to Katherine grid, as well as separate supply agreements with customers like IPL.

Reserves data is difficult to pin down, however, Blacktip was initially predicted on 2P reserves of ~950PJ and 5.7Mb of condensate. Remaining reserves as at Apr-2023 were noted as ~180PJ, although we can't be certain of that estimate.

Exhibit 2: Financial Summary

EMPIRE ENERGY GROUP LTD		EEG					
YEAR END		Dec					
NAV	A\$m	\$1.19					
SHARE PRICE	A\$cps	\$0.20		priced as of close trading 7-Jun			
MARKET CAP	A\$m	155					
ORDINARY SHARES	M	773					
OPTIONS	M	10					
COMMODITY ASSUMPTIONS							
		2020	2021	2022E	2023E		
Realised oil price	US\$/b	39.48	67.98	94.25	79.69		
Realised gas price	US\$/mcf	1.96	3.72	6.42	2.69		
Exchange Rate	A\$:US\$	0.6989	0.7514	0.6946	0.6757		
RATIO ANALYSIS							
		2020	2021	2022E	2023E		
Shares Outstanding	M	324	612	773	773		
EPS (pre sig items)	UScps		(2.41)	(0.54)	(0.64)		
EPS	Acps	(2.73)	(2.41)	(0.54)	(0.64)		
PER	x		na	na	na		
OCFPS	Acps	(0.61)	(5.35)	37.40	2.60		
CFR	x		na	na	na		
DPS	Acps						
Dividend Yield	%						
BVPS	Acps	13.4	23.8	23.7	24.4		
Price/Book	x			0.8x	0.8x		
ROE	%			na	na		
ROA	%			na	na		
(Trailing) Debt/Cash	x						
Interest Cover	x						
Gross Profit/share	Acps	3.7	5.7	5.9	2.7		
EBITDAX	A\$m	2.9	3.0	6.7	3.0		
EBITDAX Ratio	%						
EARNINGS							
	A\$000s	2020	2021	2022E	2023E		
Revenue		6,464	8,502	12,662	7,652		
Cost of sales		(5,266)	(5,005)	(8,135)	(5,585)		
Gross Profit		1,198	3,497	4,527	2,068		
Other revenue							
Other income		1,039	1,606	1,927	296		
Exploration written off							
Finance costs		(755)	(568)	(677)	(669)		
Impairment		0	0	(2,705)	0		
Other expenses		(8,682)	(14,332)	(8,511)	(6,817)		
EBIT		(7,013)	(11,305)	(1,851)	(3,707)		
Profit before tax		(7,485)	(10,835)	(3,983)	(4,749)		
Taxes		(200)	(213)	(213)	(200)		
NPAT Reported		(7,684)	(11,048)	(4,196)	(4,949)		
Underlying Adjustments		0	0	0	0		
NPAT Underlying		(7,684)	(11,048)	(4,196)	(4,949)		
CASHFLOW							
	A\$000s	2020	2021	2022E	2023E		
Operational Cash Flow		(1,970)	(7,044)	13,796	1,701		
Net Interest		(755)	(568)	(677)	(452)		
Taxes Paid		(200)	(213)	(187)	(120)		
Other							
Net Operating Cashflow		(2,924)	(2,460)	20,082	1,356		
Exploration		(856)	0	0	(4,181)		
PP&E		(12)	0	(133)	(5)		
Petroleum Assets		(12,841)	(12,965)	(54)	0		
Net Asset Sales/other		0	0	0	0		
Net Investing Cashflow		(12,841)	(24,443)	(50,419)	(12,000)		
Dividends Paid							
Net Debt Drawdown		(1,845)	(817)	(793)	(500)		
Equity Issues/(Buyback)		17,640	39,359	28,928	0		
Other							
Net Financing Cashflow		15,795	38,542	28,550	(500)		
Net Change in Cash		29	11,639	(1,786)	(11,144)		
BALANCE SHEET							
	A\$000s	2020	2021	2022E	2023E		
Cash & Equivalents		14,146	25,650	24,092	12,948		
O&G Properties		46,442	34,900	85,635	97,931		
PPE + ROU Assets		1,716	1,306	1,328	860		
Total Assets		66,563	158,823	207,710	207,480		
Debt		7,824	8,027	8,127	7,311		
Total Liabilities		36,327	49,502	80,240	80,067		
Total Net Assets/Equity		30,236	109,320	127,470	127,413		
Net Cash/(Debt)		6,322	17,622	15,965	5,636		
Gearing dn/(dn+e)							
NET PRODUCTION							
		2020	2021	2022E	2023E		
Crude Oil	kb	2	2	2	2		
Nat Gas	mmcf	1,630	1,676	1,727	1,727		
TOTAL	kboe	273	282	290	290		
Product Revenue							
	A\$m	6.5	8.5	12.7	7.7		
Cash Costs							
	A\$m	(5.3)	(5.0)	(8.1)	(5.6)		
Ave Price Realised							
	A\$/boe	23.64	30.17	43.66	26.41		
Cash Costs							
	A\$/boe	(19.26)	(17.76)	(28.05)	(19.27)		
Cash Margin		4.38	12.41	15.61	7.14		
RESOURCES and RESERVES							
		Contingent Resources			Prospective Resources		
		1C	2C	3C	1U	2U	3U
Northern Territory							
EP 187							
					566	1,282	2,284
					1,020	1,878	3,782
					204	383	668
TOTAL PJ					1,790	3,543	6,734
Carpentaria							
		113	666	846			
		120	678	844			
			8	16			
			12	24			
TOTAL PJ		233	1,364	1,730			
Carpentaria East							
		35	185	871			
		36	190	906			
TOTAL PJ		71	375	1,777			
Aggregate PJ		304	1,739	3,507			
US Onshore							
		28	38	42			
EQUITY VALUATION							
		Risked Range			Low	Mid	High
	A\$m	Low	Mid	High		A\$/share	
Northern Territory							
EP-187							
		720	770	946	\$0.93	\$1.00	\$1.22
		41	103	217	\$0.05	\$0.13	\$0.28
US Onshore							
		27	38	42	\$0.03	\$0.05	\$0.05
		788	911	1,205	\$1.02	\$1.18	\$1.56
Net cash/(debt)							
			15				
Corporate costs							
			(10)				
TOTAL		793	916	1,210	\$1.03	\$1.19	\$1.57
Shares on issue (mn)							
		773 mn					

Source: RaaS Advisory, company data



FINANCIAL SERVICES GUIDE

RaaS Advisory Pty Ltd

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

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