

Carpentaria-1 successfully flows gas to surface

Empire Energy Group Limited (ASX:EEG) is a junior oil and gas producer and explorer with onshore Northern Territory (NT) and US oil & gas assets. EEG holds the largest acreage position (28.9m acres) in the highly prospective Greater McArthur Basin, which includes the Beetaloo Sub-basin. After a material uplift in its 2C/2U gas/liquids resource base, with the 100% buyout of the Pangaea-EMG JV Beetaloo tenements for ~\$57m (@30cps), 2C Contingent Resources now lie @ 199Bcf gas / 3.5mmbbls liquids. The NT region is fast developing as a gas-liquids rich strategic bolster for east coast Australia's future energy needs plus Darwin's expanding LNG export terminals, amid strong policy support from both Territory and Federal governments. The company has reported that its Carpentaria-1 well in EP187 has successfully flowed gas to surface during the clean-up operations post the completion of the fracture stimulation campaign. EEG commenced vertical fracture stimulation of four stacked shale targets within the Velkerri Formation earlier this month. Initial flow-back of fluids pumped into the C Shale yielded gas at surface in the first hours of flow-back with gas contribution steadily increasing through the initial flow-back period. This is a positive early sign for the business development case for Carpentaria-1.

Business model

Empire Energy Group (EEG) is a junior oil & gas producer/exploration company, focused on maturing its portfolio of onshore, long-life oil and gas fields. The company is the 2nd largest conventional gas producer in the US NY State and holds substantial exploration acreage (28.9m acres) in Australia's Northern Territory, McArthur-Beetaloo basins, considered world-class. EEG will be looking to generate commercial gas flow rates to underpin reserves bookings and support an early development opportunity. Success could see first cash flow within 24-36 months (RaaS estimate), assisted by liquids "credits", assuming existing pipeline infrastructure links & upgrades are delivered in parallel; supported by generous Federal government "Basin Strategic Plan" funding.

A gas flare so early is a positive sign

EEG commenced its vertical fracture stimulation programme in early June across four "stacked" shale zones in the Velkerri Formation. Initial flow-back of fluids pumped into the C Shale resulted in gas to surface evidenced by a gas flare. The company noted that the gas rate has steadily increased through the initial flow-back period. EEG will now complete the well with a production string in preparation for further analysis and extended flow rate testing. These results will provide direct input into defining the commercial model noting Carpentaria-1 is a vertical well with limited frac zones. Importantly, delivering a gas flare so early in the initial fluid recovery phase is a positive sign for the potential success of the programme.

Valuation is \$0.98/share or \$608m

Our valuation range for EEG is \$385m to \$728m or \$0.62-\$1.17/share with \$608m or \$0.98/share being the mid-point. With several event drivers emerging over the next 6-12 months, there is the potential for further uplifts to the valuation.

Historical earnings and RaaS Advisory estimates

Year end	Revenue (A\$m)	Gross Profit (A\$m)	NPAT reported (A\$m)	OCFPS (AUD cps)	EPS Adj (AUD cps)	Price/Book (x)
12/19a	7.8	1.7	(17.3)	0.69	(9.31)	4.6
12/20a	6.5	1.2	(7.7)	(0.61)	(2.73)	2.5
12/21e	6.4	1.6	(5.1)	(0.11)	(0.83)	1.9
12/22e	6.6	1.7	(4.8)	(0.08)	(0.77)	1.9

Source: Company data, RaaS estimates for FY21e & FY22e

Energy exploration & production

21st June 2021

Share details

ASX Code	EEG
Share price	\$0.345
Market Capitalisation	\$213.9M
Shares on issue	620M
Net cash at 12 May	~\$18.6M
Gross cash at 12 May	~\$27.6M

Share performance (12 months)



Upside Case

- EEG's Carpentaria-1 Velkerri shale production/seismic program creates strong commercial gas/liquids business development case
- Further McArthur-Beetaloo work programs generate significant commercial outcomes
- EEG drilling success generates high-value LT strategic partnership(s) & funding options

Downside Case

- Beetaloo flow rates prove uncommercial, negatively impacting regional permit values
- Equity issue financing becomes highly dilutive to future share capital growth
- Fracking success in NT/Qld pushes onshore energy prices to sub-economic levels.

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

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*The analyst holds shares

Exhibit 1: Financial Summary

EMPIRE ENERGY GROUP LTD					EEG					
YEAR END		Dec								
NAV	A\$mn	611								
SHARE PRICE	A\$cps	0.35			priced as of close trading	18-Jun				
MARKET CAP	A\$mn	214								
ORDINARY SHARES	M	620								
OPTIONS	M	57								
PROFIT & LOSS					A\$000s	2019	2020	2021E	2022E	
Revenue		7,763	6,464	6,375	6,561					
Cost of sales		(6,026)	(5,266)	(4,725)	(4,885)					
Gross Profit		1,737	1,198	1,650	1,676					
Other revenue										
Other income		224	1,039	262	262					
Exploration written off										
Finance costs		(916)	(755)	(747)	(730)					
Impairment		(1,677)	0	0	(2,465)					
Other expenses		(18,806)	(8,682)	(6,749)	(6,460)					
EBIT		(13,783)	(7,013)	(3,868)	(1,121)					
Profit before tax		(17,069)	(7,485)	(5,100)	(4,784)					
Taxes		(194)	(200)	0	0					
NPAT Reported		(17,263)	(7,684)	(5,100)	(4,784)					
Underlying Adjustments		(5,971)	0	0	0					
NPAT Underlying		(23,234)	(7,684)	(5,100)	(4,784)					
CASHFLOW					A\$000s	2019	2020	2021E	2022E	
Operational Cash Flow		1,822	(1,970)	569	618					
Net Interest		(2,712)	(755)	(571)	(556)					
Taxes Paid		(194)	(200)	(50)	(100)					
Other										
Net Operating Cashflow		(1,084)	(2,924)	(51)	(38)					
Exploration		0	(856)	0	0					
PP&E		0	(12)	0	(133)					
Petroleum Assets		(2,658)	(12,841)	(6,061)	0					
Net Asset Sales/other		27,698	0	0	0					
Net Investing Cashflow		25,040	(12,841)	(18,388)	(10,000)					
Dividends Paid										
Net Debt Drawdown		(26,943)	(1,845)	(1,170)	(1,222)					
Equity Issues/(Buyback)		11,562	17,640	35,240	153					
Other										
Net Financing Cashflow		(15,381)	15,795	33,320	(1,069)					
Net Change in Cash		8,575	29	14,881	(11,107)					
BALANCE SHEET					A\$000s	2019	2020	2021E	2022E	
Cash & Equivalents		14,106	14,146	29,027	17,920					
O&G Properties		37,505	46,442	125,485	135,748					
PPE + ROU Assets		711	1,716	1,198	1,181					
Total Assets		56,594	66,563	156,588	155,484					
Debt		9,251	7,824	7,826	7,104					
Total Liabilities		37,089	36,327	45,113	45,461					
Total Net Assets/Equity		19,505	30,236	111,475	110,023					
Net Cash/(Debt)		4,855	6,322	21,201	10,816					
NET PRODUCTION						2019	2020	2021E	2022E	
Crude Oil	kb	89	2	2	2					
Nat Gas	mmcf	1,778	1,630	1,679	1,729					
TOTAL	kboe	385	273	282	290					
Product Revenue	A\$mn	7.8	6.5	6.4	6.6					
Cash Costs	A\$mn	(6.0)	(5.3)	(4.7)	(4.9)					
Ave Price Realised	A\$/boe	20.16	23.64	22.64	22.64					
Cash Costs	A\$/boe	(15.65)	(19.26)	(16.78)	(16.86)					
Cash Margin		4.51	4.38	5.86	5.78					
COMMODITY ASSUMPTIONS						2019	2020	2021E	2022E	
Realised oil price	US\$/b	59.76	39.48	59.48	56.84					
Realised gas price	US\$/mcf	2.44	1.96	2.71	2.63					
Exchange Rate	A\$:US\$	0.6958	0.6989	0.7644	0.7623					
RESOURCES and RESERVES					assumed post transaction					
					Contingent Resources			Prospective Resources		
					1C	2C	3C	1U	2U	3U
Northern Territory										
Gas (Bcf)		58.1	198.5	501.9	11,979	42,124	138,006			
Liquids (Mb)		1.0	3.5	14.2	169	792	3,608			
TOTAL (Mboe)		10.6	36.6	97.8	2,165	7,813	26,609			
US Onshore										
					1P	2P	3P			
Gas (Bcf)		24	34	38						
		0	Mb	24	62					
		0	Mb	24	47					
TOTAL (Mboe)				86	109					
					2P	3P				
US										
Gas			Bcf	34.4	38.2					
EQUITY VALUATION					Low	Mid	High	Low	Mid	High
NT										
Contingent		\$149	\$186	\$214	\$0.24	\$0.30	\$0.34			
Prospective		\$218	\$398	\$485	\$0.35	\$0.64	\$0.78			
US Onshore										
Appalachian		\$5	\$10	\$15	\$0.01	\$0.02	\$0.02			
TOTAL		\$371	\$594	\$714	\$0.60	\$0.96	\$1.15			
Net Cash (Debt)		\$22	\$22	\$22						
Corporate Costs		-\$5	-\$5	-\$5						
TOTAL		\$388	\$611	\$731	\$0.63	\$0.98	\$1.18			
Shares on Issue		620 mn								
RATIO ANALYSIS					2019	2020	2021E	2022E		
Shares Outstanding	M	263	324	618	619					
EPS (pre sig items)	US\$cps	(0.83)	(0.77)	(0.83)	(0.77)					
EPS	Acps	(9.31)	(2.73)	(0.83)	(0.77)					
PER	x			na	na					
OCFPS	Acps	0.69	(0.61)	(0.11)	(0.08)					
CFR	x			na	na					
BVPS	Acps	7.5	13.4	18.0	17.8					
Price/Book	x	4.6x	2.6x	1.9x	1.9x					
ROE	%			na	na					
ROA	%			na	na					
Gross Profit/share	Acps	6.6	3.7	2.7	2.7					
EBITDAX	A\$M	2.7	2.9	2.5	2.6					
EBITDAX Ratio	%	34.2%	44.6%	40.0%	39.3%					

Source: RaaS Advisory



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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