

12 October 2020

Empire Energy Group Ltd

Shallower liquid shows in Carpentaria-1 excite

Empire Energy Group Limited (EEG.ASX) is a junior oil and gas producer and explorer with onshore NT and US oil & gas assets. EEG holds the largest acreage position (>14.5m acres) in the highly prospective, potentially global-scale NT McArthur-Beetaloo basins. The province is fast developing as a gas-rich (and now looks to be liquids-rich) strategic bolster for east coast Australia's future energy needs and Darwin's expanding LNG export terminals, amid strong policy support from territory and federal governments. EEG has a P50 prospective resource of 13.5Tcf gas in the McArthur-Beetaloo basins and also owns conventional gas/oil assets in the US Appalachia, 80%-hedged at US\$2.50/mcf. EEG has announced encountering log indications pointing to the potential for liquids-rich gas across a thick and contiguous Velkerri Shale section in Carpentaria-1. The well intersected the Velkerri Shale at a much shallower level than expected across nearly 1,000m, from 833m measured depth below surface (MD) to 1,831 MD. The higher liquids content of the Velkerri Shale gas in EEG's EP187 offers the potential to substantially enhance the economics of future production, via lower drilling costs and liquids "credits", lifting EEG's overall acreage value, which had previously been thought as lying "beyond" the Beetaloo's core zone. The news positively underpins our risk-weighted mid-point valuation of \$0.56/share.

Business model

Empire Energy Group (EEG) is a junior oil & gas producer/exploration company, focused on maturing its portfolio of onshore, long-life oil & gas fields. EEG is the 2nd largest conventional gas producer in the US NY State and holds substantial exploration acreage (14.5m acres) in Australia's Northern Territory McArthur-Beetaloo basin. Given the region's high prospectivity, success from drilling works may generate cashflows within 36-48 months, assuming links & upgrades to pipeline infrastructure are delivered in parallel.

Log results suggest EP187 no longer Beetaloo's poor cousin

Empire Energy Group (EEG) has announced mud gas log results in its NT EP187 Carpentaria-1 well, recording potential for liquids rich gas in the Velkerri Shale which exceeds the results of analogue gas wells previously drilled across the Beetaloo sub-basin by Santos and Origin Energy. The Velkerri Shale has also been intersected at a shallower depth than originally prognosed, between 833m MD and 1,831m MD, closer to the surface than offset analogue wells with equivalent thickness and gas shows, suggesting reduced drilling costs. Empire will now continue drilling to a revised total depth of ~2,200m MD (previously 2,900m) and acquire a full suite of wireline logs, large diameter rotary sidewall cores and diagnostic fracture integrity tests. Fracture stimulation and flow testing is scheduled for Q2 CY21, which in the success case, will allow Empire to book maiden contingent resources including higher value liquid hydrocarbons not previously expected.

Base valuation is \$0.56/share

We assign a base case valuation of \$182m or \$0.56/share which is 8% risk weighted. We will await completion of this drill programme before considering our risk weighting. We note that detail to date is supportive of our current valuation.

Historical earnings and RaaS Advisory estimates

Year end	Revenue (US\$m)	Gross Profit (US\$m)	NPAT reported (US\$m)	OCFPS (AUD cps)	EPS Adj (AUD cps)	Price/Book (x)
12/18a	6.6 [^]	1.9 [^]	(5.3) [^]	(0.15)	(1.41)	27.0
12/19a	5.4	1.2	(12.0)	(4.12)	(9.29)	4.5
12/20e	4.3	1.0	(3.8)	0.38	(1.65)	4.8
12/21e	4.8	1.5	(3.1)	1.59	(1.36)	5.1

Source: : Company data, RaaS estimates for FY20e & FY21e [^]restated for US Marcellus asset sale

Share details

ASX Code	EEG
Share Price (9 October)	\$0.335
Market Cap	\$108.4M
No of shares	323.5M
Net cash	~US\$12M
Gross cash	~US\$16M
Sector	Energy

Share price - 12 months (source: Thomson Reuters)



Upside Case

- EEG's Carpentaria-1 drill program confirms the Beetaloo Velkerri shales extend into EP187; holding both gas & liquids
- Further McArthur-Beetaloo work programmes generate significant commercial outcomes
- EEG drilling success generates high-value LT strategic partnership(s) & funding options

Downside Case

- McArthur-Beetaloo EP 187 drilling proves unsuccessful, negatively impacting remaining Beetaloo permit (EP184,188) values
- Continuing financing through equity issues highly dilutive to future capital growth
- Fracking success in NT/Qld pushes onshore energy prices to sub-economic levels.

Catalysts

- Mid-Nov: Positive Carpentaria drill programme results
- Ongoing: Upgrades to NT P50 13.5 Tcf resource est.

Comparative companies (Australia & NZ)

AJQ, CTP, GLL, STX, WGO

Company contacts

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Substantial Shareholders (source: Thomson Reuters)

Global Energy & Resources Development 8.72%,
Macquarie Investment Management 8.18%
Elphinstone Group 5.77%, Liangrove Media 5.5%

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FINANCIAL SERVICES GUIDE

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AFSL 456663

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