

# Diversified Gas and Oil

Forecast update

## Updating short-term forecasts

We have updated our short-term forecasts to reflect better than expected post-Core Appalachia acquisition operational performance and our revised production forecasts and gas price realisations. Unit operating costs averaged \$6.42/boe in October 2018 (12% lower than the average for 9M18), reflecting lower operating costs associated with acquired assets and realised synergies. Diversified Gas and Oil (DGO) has reached an agreement with two states on plugging and abandonment (P&A) schedules, providing greater certainty of its short-term P&A liabilities; we expect more agreements to follow. In December, DGO announced a 3.30c/share dividend, an increase of 18% from the previous quarter. Management intends to maintain this payout and we forecast a FY19 dividend yield of 8.9%. Our valuation is updated to 163.6p/share (+12%) driven by revised unit costs, an updated production forecast for FY19 and rolling forward the discount date. DGO's cash flow is largely sheltered from oil price volatility with 88% of production linked to Henry Hub.

Year end	Revenue (\$m)	EBITDA (\$m)	PBT* (\$m)	Net cash/ (debt) (\$m)	Dividend yield** (%)	Capex (\$m)
12/16	17.1	26.5	32.5	(37.1)	N/A	(9.2)
12/17	41.8	23.2	4.7	(55.8)	2.7	(93.1)
12/18e	277.7	145.3	70.7	(481.8)	5.2	(922.4)
12/19e	451.0	242.4	126.6	(377.5)	8.9	(32.3)

Note: \*PBT normalised, excluding amortisation of acquired intangibles, exceptional items and share-based payments. \*\*Dividend yield based on expected cash payment during year.

## FY19 higher production offset by lower pricing

We have revised our forecasts to reflect post-acquisition operating metrics and our updated oil and gas production forecast and price deck. Revenue increases by 20% for FY18e and 1% for FY19e to \$277.7m and \$451.0m, while EBITDA is up 21% and down 5% to \$145.3m and \$242.4m respectively. The upgrade to FY18 is based on an earlier effective date for the acquisition of EQT, while FY19 is more reflective of post-acquisition run rate economics. We update our production forecast for FY19 to 67.7kboed, 6% higher than previous forecasts.

## Firming up the P&A schedule

During 2018, DGO acquired approximately 40,000 wells. Even though the deals were value accretive, the high number of acquired mature well locations increased DGO's exposure to P&A. DGO has been able to minimise the liability value through well life extension and state P&A agreements. Further agreements with key states such as Pennsylvania and Kentucky would provide greater certainty of this liability.

## Valuation: Base case increases to 163.6p/share

We have raised our valuation to 163.6p/share (+12%) based on our updated FY19 production estimate, lower gas price realisations and rolling forward the discount date to 1 January 2019. Assuming management maintains a 3.30c/share quarterly dividend for the underlying asset base, the current share price implies an FY19 dividend yield of 8.9%.

## Oil & gas

23 January 2019

Price **115p**

Market cap **£624m**

US\$/£0.77

Net debt (\$m) at 30 June 2018 130

Shares in issue 542.7m

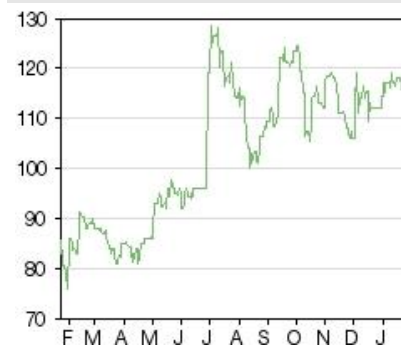
Free float 92.7%

Code DGO

Primary exchange AIM

Secondary exchange N/A

## Share price performance



% 1m 3m 12m

Abs (0.4) (1.3) 33.9

Rel (local) (3.7) 0.5 49.4

52-week high/low 128.5p 76.0p

## Business description

Diversified Gas & Oil is a conventional natural gas and oil producer with a main focus in the US onshore. The company possesses long-life, low operational cost, mature producing assets with slow decline profiles in the Appalachian region, in the states of Pennsylvania, West Virginia and Ohio.

## Next event

FY19 annual report H119

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## FY18 and FY19 forecast upgrade

In December 2018, the board of DGO released an operations and trading update following the acquisition of Core Appalachia as the assets were integrated within the DGO operating structure. The effective date of 2018 acquisitions, better than expected operational performance and high gas realisations provided the basis for DGO to highlight that FY18 EBITDA would be ahead of market expectations. EBITDA reached \$23.6m during October as production reached c 70kboed and supported by a strong gas price. FY19 is to be more reflective of DGO's post-acquisition run rate, for which we forecast EBITDA of \$242m.

We have adjusted forecasts to reflect strong Q418 gas price realisations, driving up FY18 EBITDA by 21% to \$145m and updated FY18 and FY19 production forecasts. A material increase in FY18 production and EBITDA is driven by an earlier than expected effective date for the EQT transaction. We revise our FY19 production forecast by +6% to 67.7kboed based on higher than expected output in Q418 (October production reported at 70kboed). This is offset by a reduction in our forecast Henry Hub pricing for FY19 (based on the latest EIA forecasts) and higher post-transaction overheads resulting in an FY19 EBITDA decrease of 5% to \$242m. Unit operating costs have decreased since the acquisition of Core, although capex now includes one-off expenses related to upgrading and integrating financial reporting systems.

Exhibit 1: Old vs new forecasts									
	New			Core			Change		
	2018e	2019e	2020e	2018e	2019e	2020e	2018e	2019e	2020e
Production (kboed)	41.0	67.7	65.0	34.5	63.9	61.4	19%	6%	6%
Revenue (\$m)	278	451	426	231	448	429	20%	1%	(1%)
EBITDA (\$m)	145	242	226	121	254	243	21%	(5%)	(7%)
FCF (\$m) – excluding acquisitions	105	176	169	92	199	196	13%	(12%)	(14%)
P&A expenditure (\$m)	2.8	2.8	2.8	2.9	3.0	3.1	(5%)	(7%)	(7%)
Revenue/boe (\$/boe)	17.53	18.85	17.69	17.67	18.51	18.71	(1%)	2%	(5%)
Opex*/boe (\$/boe)	7.37	7.03	7.00	7.41	7.09	7.03	(1%)	(1%)	0%
G&A/boe (\$/boe)	1.30	1.30	1.30	1.07	1.07	1.07	21%	21%	21%
Cash costs/boe (\$/boe)	8.67	8.33	8.30	8.48	8.16	8.10	2%	2%	3%
Capex/boe (\$/boe)	1.36	1.31	0.99	0.83	0.99	1.00	64%	31%	(1%)
HH Gas price assumption (\$/mcf)	3.26	2.99	3.02	3.10	3.23	3.13	5%	(7%)	(4%)
WTI (\$/bbl)	65.06	54.19	60.76	68.46	69.56	68.96	(5%)	(22%)	(12%)

Source: Edison Investment Research. Note: \*Includes LOE, G&T and ad valorem and severance taxes.

In December 2018, DGO announced it would increase its dividend payment in relation to Q318 to 3.30c/share, an increase of 18% from Q1 and Q218 of 2.80c/share. Assuming management maintains a 3.30c/share quarterly dividend, we forecast a FY19 dividend yield of 8.9% at the current share price.

## Plugging & Abandonment

Following 2018's acquisitions, the number of wells operated by DGO has reached approximately 60,000 and has raised asset retirement obligations under-proportionally to the uptick in cash flows. The company has been able to negotiate with state regulatory bodies and reach agreements on abandonment schedules, allowing DGO to manage the NPV of this liability and where possible extending well life. In 2018, DGO completed the plugging and abandonment of approximately 40 wells, at an average cost of \$23,800 per well.

## West Virginia agreement

In December 2018, DGO reached an agreement with the West Virginia Department of Environmental Protection. The 15-year agreement sets out DGO's P&A obligations within-state. Of DGO's 60,000 wells, approximately 17,000 are in West Virginia, making this a significant deal to have struck.

Under the agreement, DGO commits to assessing the company's West Virginia oil and gas well inventory until 30 June 2019, and plug and abandon 30 wells. Until 2034 DGO will have to return to production or plug and abandon not less than 50 wells per year, of which DGO will have to plug at least 20 non-productive wells. For the duration of the agreement, DGO will post a \$3m bond to the benefit of the state of West Virginia, which will be released following DGO's fulfilment of the agreement's terms.

DGO also has an existing P&A agreement with the state of Ohio in which DGO commits to plug and abandon up to 18 wells per year, (or a total of 90 wells over five years) with no fewer than 14 wells per year. DGO is actively engaged in discussions with the states of Pennsylvania and Kentucky to complete similar long-term agreements.

Exhibit 2: P&A assumptions and NPV			
	Edison assumptions	DGO assumptions	3 <sup>rd</sup> party assumptions
Schedule (P&A wells per year)	Until 2035 – 125 From 2035 – 1,000	Years 1-5 – 90 Years 6-15 – 130 Thereafter – 1,100	Years 1-5 – 70 Years 6-15 – 100 Thereafter – 1,000
Weighted average P&A per well (\$)	24,000	24,240	29,863
Inflation (%)	2.50	2.20	-
Discount rate (%)	10	10	10
NPV <sub>10</sub> (\$m)	117	89	60

Source: Edison Investment Research, DGO; Note: NPV might be affected by the timing of P&A (eg more expensive wells being P&A in later periods).

## Valuation

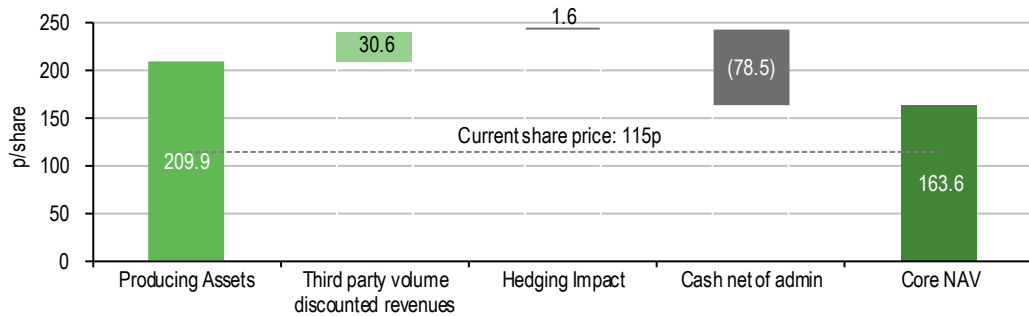
We value DGO using a conventional NAV approach based on the NPV<sub>10</sub> of the company's producing assets minus overheads and net financial liabilities. A full breakdown of our NAV is provided in Exhibit 3, using data available in the company's last published prospectus and CPR, as well as public sources.

Exhibit 3: Edison detailed NAV breakdown for DGO							
Asset	Country	Diluted WI	CoS	Recoverable reserves		Net risked value	Risked value
				Net post royalty	NPV <sub>10</sub> /boe	\$m	p/share
		%	%	mboe	\$/boe		
Net (Debt)/Cash end-2018e						(481.8)	(68.7)
SG&A – NPV <sub>10</sub> of 3yrs						(68.4)	(9.8)
Hedging Impact						11.2	1.6
Third-party volume discounted revenues						214.7	30.6
<b>Production</b>							
Kentucky	US	90	100	224	4.9	823.6	117.5
Ohio	US	82	100	17	5.1	86.7	12.4
Pennsylvania	US	82	100	115	2.1	244.3	34.8
Tennessee	US	82	100	5	4.2	21.1	3.0
Virginia	US	81	100	11	5.4	37.2	5.3
West Virginia	US	84	100	150	5.5	258.9	36.9
<b>Core NAV</b>				<b>522</b>		<b>1,147.4</b>	<b>163.6</b>

Source: Edison Investment Research. Note: Number of shares: 542.7m, FX: US\$/£0.77 (due to the recent volatility in exchange rates and for the sake of consistency, we assume the FX based on the average of the last six months before the end of each quarter).

Exhibit 4 breaks down our updated valuation by asset class showing where our base case core NAV is relative to the current share price.

**Exhibit 4: NAV waterfall**



Source: Edison Investment Research

### Key sensitivities: Gas price and LOE

Key drivers of DGO's valuation are assumed gas price and LOE. The table below provides a base case valuation sensitivity to these key drivers. Our base assumes a long-term (2022) gas price of \$3.10/mcf and LOE of \$5.06/boe (LOE excludes gathering and transport, SG&A and production taxes), both inflated by 2.5% thereafter.

Our oil and gas base case price assumptions are in line with EIA forecasts for 2019 at \$54.19/bbl, rising to \$70.00/bbl long-term (2022). For Henry Hub we assume a gas price of \$2.99/mcf in 2019 and \$3.10/mcf long-term (2022).

**Exhibit 5: Valuation sensitivity to LOE and gas price assumption**

LOE \$/boe	-25%	-15%	5.06	+15%	+25%
\$/mcf LT					
-25%	134.3	123.1	106.3	89.4	78.2
-15%	157.5	146.3	129.5	112.7	101.4
3.10	191.7	180.5	163.6	146.8	135.6
+15%	226.5	215.3	198.5	181.7	170.5
+25%	249.5	238.3	221.5	204.7	193.5

Source: Edison Investment Research

**Exhibit 6: Financial summary**

	\$m	2016	2017	2018e	2019e	2020e
Year-end December		IFRS	IFRS	IFRS	IFRS	IFRS
<b>PROFIT &amp; LOSS</b>						
Revenue		17.1	41.8	277.7	451.0	426.0
Cost of sales		(15.3)	(27.9)	(154.1)	(244.2)	(234.5)
Gross profit		1.7	13.9	123.6	206.8	191.5
General & admin		(2.8)	(8.9)	(19.4)	(32.1)	(30.9)
EBITDA		26.5	23.2	145.3	242.4	225.6
Depreciation		(4.0)	(7.0)	(41.2)	(67.7)	(65.0)
Operating Profit (before amort. and except.)		22.5	16.2	104.1	174.7	160.6
Intangible amortisation		-	-	-	-	-
Exceptionals		-	-	-	-	-
Other		-	-	-	-	-
EBIT		22.5	16.2	104.1	174.7	160.6
Net interest		10.1	(11.5)	(33.4)	(48.1)	(43.2)
Profit Before Tax (norm)		32.5	4.7	70.7	126.6	117.4
Profit Before Tax (FRS 3)		32.5	4.7	70.7	126.6	117.4
Tax		(14.8)	4.1	(19.1)	(34.2)	(31.7)
Profit After Tax (norm)		32.5	9.2	51.6	92.4	85.7
Profit After Tax (FRS 3)		32.5	8.9	51.6	92.4	85.7
Average Number of Shares Outstanding (m)		42.0	120.1	442.6	541.8	541.8
EPS - normalised (c)		44.2	7.7	11.7	17.1	15.8
EPS - normalised fully diluted (c)		44.2	7.7	11.7	17.1	15.8
EPS - (IFRS) (c)		42.1	7.4	11.7	17.1	15.8
Dividend per share (c)		-	4.0	8.0	13.2	13.2
Gross margin (%)		10.2	33.2	44.5	45.9	45.0
EBITDA margin (%)		155.0	55.5	52.3	53.7	52.9
Operating margin (before GW and except.) (%)		131.4	38.8	37.5	38.7	37.7
<b>BALANCE SHEET</b>						
Non-current assets		81.1	198.3	1,200.5	1,165.1	1,123.7
Intangible assets		76.8	190.4	1,192.5	1,157.2	1,115.7
Tangible assets		3.3	6.9	6.9	6.9	6.9
Investments		1.0	1.0	1.0	1.0	1.0
Current assets		4.7	30.3	66.3	66.3	66.3
Stocks		-	-	0.0	0.0	0.0
Debtors		3.1	13.9	35.0	35.0	35.0
Cash		0.2	15.2	30.0	30.0	30.0
Other/ restricted cash		1.4	1.3	1.3	1.3	1.3
Current liabilities		(38.5)	(15.3)	(23.2)	(23.2)	(23.2)
Creditors		(11.3)	(15.0)	(22.8)	(22.8)	(22.8)
Short-term borrowings		(27.2)	(0.4)	(0.4)	(0.4)	(0.4)
Long-term liabilities		(38.2)	(123.1)	(717.5)	(661.3)	(605.6)
Long-term borrowings		(10.1)	(70.6)	(511.4)	(407.2)	(309.8)
Other long-term liabilities (inc. decomm.)		(28.1)	(52.5)	(206.2)	(254.1)	(295.8)
Net assets		9.2	90.2	526.0	546.9	561.1
<b>CASH FLOW</b>						
Operating cash flow		5.1	6.9	111.7	208.1	192.4
Capex inc acquisitions		(9.2)	(93.1)	(922.4)	(32.3)	(23.5)
Other		0.1	-	-	-	-
Equity issued		-	77.0	420.0	-	-
Dividends		(1.0)	(5.8)	(35.3)	(71.5)	(71.5)
Net cash flow		(4.9)	(15.0)	(425.9)	104.2	97.4
Opening net debt/(cash)		42.8	37.1	55.8	481.8	377.5
HP finance leases initiated		-	-	-	-	-
Other		10.7	(3.8)	-	-	-
Closing net debt/(cash)		37.1	55.8	481.8	377.5	280.2

Source: DGO, Edison Investment Research. Note: \*Assumes DGO maintains a minimum cash balance of \$30m and pays down debt.

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