

Egdon Resources

Resolution CPR published ahead of farm-out

We have re-visited our conventional valuation of Egdon post the company's interim results (to end January 2019) and the recent resource assessment for Resolution. We also factor in a decrease in our short-term gas price expectations, lower than previously forecast production for FY19 and the removal of the risked value for Biscathorpe-2 exploration. As a result, our RENAV is reduced by 1.2p/share to 11.5p/share. These reductions are partly offset by an increase in our valuation for Resolution (from 3.2p/share to 7.1p/share), driven by Schlumberger's 2019 resource assessment and our revised economic model. We continue to believe that significant uncertainty remains regarding the commerciality of Resolution ahead of further appraisal, but we believe recent industry interest in SNS Zechstein gas appraisal increases the likelihood of a farm-out.

Year end	Revenue (£m)	PBT* (£m)	EPS* (p)	EBITDA (£m)	Net cash (debt) £m	Cashflow from operations (£m)
07/17	1.0	(2.2)	(0.7)	(1.2)	6.1	(0.4)
07/18	0.8	(1.7)	(0.8)	(2.2)	2.8	(1.6)
07/19e	2.2	(2.1)	(0.2)	(0.5)	0.6	(0.3)
07/20e	2.7	(1.8)	(0.8)	0.1	(0.4)	0.6

Note: *PBT and EPS are normalised, excluding amortisation of acquired intangibles, exceptional items and share-based payments.

Resolution resource upgrade

Schlumberger has provided an assessment of un-risked 2C recoverable gas (excluding Carboniferous) for the Resolution field at 206.4bcf (1C 100bcf and 3C 389bcf), versus Egdon's last published internal estimate of 2C 337bcf. We continue to believe that there is significant uncertainty around recoverable resource and hence commerciality ahead of further appraisal. Key resource uncertainties include limestone fracture porosity, matrix porosity and gas recovery factor. Egdon is actively looking for a farm-in partner to fund the acquisition of 3D seismic, followed by an appraisal well.

Springs Road: Improved drilling performance

Egdon has a 14.5% carried interest in the Springs Road-1 shale gas appraisal well operated by IGas. Further details on the core and log analysis is expected in Q219. The drilling performance (rate of penetration) has been ahead of operator expectations and reports of gas indications in the Millstone Grit, deeper parts of the Bowland Shale and the Arundian Shale are encouraging. We expect to review our probabilistic UK shale valuation model as further details emerge from SR-1.

Valuation: Funded through to mid-2020

Based on our current forecasts, Egdon is funded through to the middle of CY20, with activity at Springs Road fully carried and planned 3D seismic at Resolution expected to be funded by a farm-out. Our current valuation is 1.5p/share for producing assets, cash and net of SG&A, rising to 11.5p/share if we include risked exploration potential. Maintaining our last published UK shale model, we estimate an indicative P50 value of c 100p/share for Egdon's UK shale acreage of 188,000.

Resource update

Oil & gas

5.75p

AIM

N/A

25 April 2019

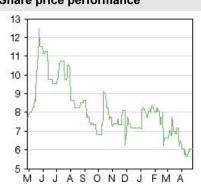
0.7 Op
£15m
1.8
260.0m
47%
EDR

Share price performance

Primary exchange

Secondary exchange

Price



%	1m	3m	12m
Abs	(15.4)	(23.9)	(5.5)
Rel (local)	(18.6)	(30.2)	(5.7)
52-week high/low		12.50p	5.63p

Business description

Egdon Resources is an AIM-listed onshore oil and gas exploration company. The group has conventional and unconventional assets in the UK.

Next event

Springs Road update Q219

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Edison profile page

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Resolution resource update and economics

Resolution was discovered by Total in 1966 with the 41/18-2 well in the Southern North Sea (SNS). The discovery sits close to the North Yorkshire coast, but is expected to be developed as an offshore field as the crest of the structure is c 6km offshore. Egdon has mapped the structural closure as extending southwards from P1929 into P2304 and has been independently assessed by Schlumberger to contain 2C resources of 206.4bcf (P50) and 230.6bcf (Pmean) un-risked (Exhibit 1). Schlumberger's resource assessment excludes the potential for underlying Carboniferous sandstones, which Egdon continues to believe contain significant additional gas potential. Our valuation of Resolution increases from 3.5p/share to 7.1p/share but we flag that valuation uncertainty remains high ahead of further appraisal.

Exhibit 1: Schlumberger's estimate of Resolution's un-risked contingent resources (bcf)

Interval	Low Estimate (1C) P90	Best Estimate (2C) P50	High Estimate (3C) P10	Mean *
Roker Dolomite	65.8	140.0	289.8	163.1
Concretionary Limestone	7.9	19.7	46.0	24.1
Cadeby Limestone	14.5	36.9	81.0	43.4
Consolidated Total	100.0	206.4	389.0	230.6

Source: Egdon Resources. Note: *Mean estimates for each interval and in aggregate.

Egdon estimated that rates of between 17 million and 22 million cubic feet per day could be achieved from a well on the structure with fracture stimulation. The P2304 licence contains a second smaller gas discovery, Endeavour, confirmed by wells 41/24A-1 (1969, Total), 41/24A-2 (1981, Total) and 41/24-3 (1993, Conoco) which tested at rates of up to 34 million cubic feet of gas per day and 1,280boed of condensate from the Plattendolomit, a Zechstein carbonate unit which is slightly younger than the Roker Dolomite (also known as the Hauptdolomit) reservoir tested in the Resolution discovery well. As with P1929, P2304 contains additional prospectivity in deeper gas bearing Carboniferous sandstones underlying the proven Zechstein reservoir sequences. The Carboniferous play is due to be tested onshore at Kirby Misperton in the Third Energy KM-8 well and this should provide further data for input into Egdon's evaluation of the Carboniferous potential.

Exhibit 2: Resolution 41/18-2 discovery well

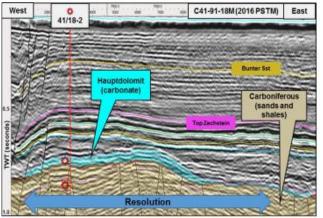
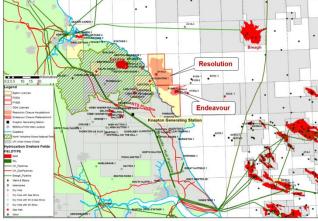


Exhibit 3: Location of Resolution and Endeavour



Source: Egdon Resources

Source: Egdon Resources



Exploration of the Zechstein has not been a primary exploration target in the UKCS (UK continental shelf). The nearest offshore Zechstein production to Resolution is from the Hewett field, which is located in Blocks 48/29 and 48/30 and c 200km to the south west. Hewett has been producing since 1986. Closer to P1929, there are several onshore fields in the Vale of Pickering which have been producing from the Zechstein Kirkham Abbey formation since 1995, including the Third Energy operated fields Kirby Misperton, Pickering, Malton and Marishes.

However, in 2019 there is likely to be a renewed focus on the Zechstein in the offshore. In February, Cluff Natural Resources (CNR) farmed out 70% including operatorship of its P2252 licence to Shell. The licence holds Pensacola, a Z2 Zechstein reef prospect that CNR estimates holds 309bcf of P50 un-risked prospective resources. The prospect sits c 20km to the north east of Resolution and this summer CNR plans to carry out a 3D seismic survey of over 400km². Meanwhile, Netherlands-based ONE-Dyas is due to spud its Ossian-Darach exploration well in May 2019 targeting a Zechstein reef in the Ossian prospect, which is also to the north east of Resolution on the northern edge of the SNS.

Data from the 41/18-2 Resolution discovery well have demonstrated that the Z2 Zechstein reservoir is a tight carbonate with low matrix porosity. Although it is thought that there could be sweet spots of higher porosity across the prospect, production would rely on the presence of natural fractures together with the application of fracture stimulation. Egdon's existing model is based on reprocessed 2D seismic and the company is planning to acquire 3D seismic in Q319, pending a farm-out, to further define the fracture networks and de-risk an appraisal well. The appraisal well would be designed to maximise the intersection of the wellbore by fractures; to achieve this it will be a horizontal well.

Significant uncertainty remains around gas in place and recoverable resource

Due to the nature of the reservoir, the estimation of gas in place (GIIP) is subject to some uncertainty, given that the extent and distribution of fractures across the structure is currently based on data from the discovery well and 2D seismic. The planned acquisition of 3D seismic will assist in refining this estimation. Similarly, the variation in reservoir quality due to the presence/absence of fractures results in some uncertainty in estimating the recovery factor. Schlumberger has assigned a recovery factor of 58% to the Zechstein Roker Dolomite (which holds 68% of the estimated contingent resources in P1929). This is consistent with recoveries from analogous Southern North Sea reservoirs. Recovery from the Zechstein in Hewett is 50%, and was reported to be 65% in the Wissey field. Recovery from the small onshore fields has been lower however, at around 12%, due to early water breakthrough. Although water breakthrough is a key potential hazard in fractured reservoirs, the testing carried out at the 41/18-2 Resolution discovery well did not find any evidence of water and both Egdon and Schlumberger have not seen water breakthrough occurring in their reservoir models.

We have modelled the development of a potential commercial gas discovery based on Edgon's proposed development concept, which involves the use of a small unmanned platform tie-back to onshore gas processing facilities. Key metrics from our asset model are provided in the table below and represent a 12-well development with an estimated gas recovery of 201bcf. Our gross unrisked NPV of \$319m is based on a UK gas price of \$7/mcf inflated by 2.5% pa. However, we note that at this stage there is significant uncertainty with regards to recoverable gas and well costs for a prospective development.



Recoverable gas (bcf)	201.0
Recoverable liquids (mmbbls)	2.4
Capex cost to first gas (\$m)	365.2
Capex + abandonment cost (\$/boe)	12.0
Opex life of field (\$/boe)	4.8
Realised gas price 2022 (\$/mcf) inflated by 2.5% per annum	7.5
Project IRR (%)	32%
Gross project NPV _{12.5} un-risked (\$m)	319.0

When valuing Resolution, we have had to take a view on the commercial chance of success (CCOS) and the potential value Egdon could retain post farm-out. When considering the CCOS we have not conducted a probabilistic valuation of the asset at this stage to determine the likelihood of commerciality which we describe as NPV(12.5) exceeding zero. Ahead of appraisal, we assume there is a 50% chance of Egdon attracting appraisal funding in the form of a farm-out and confirming that Resolution can be developed commercially. Asset valuation is highly sensitive to the realised gas price and well productivity (initial production (IP) rate and per well estimated ultimately recovery (EUR)), therefore post-appraisal confirmation of these inputs will provide for a greater certainty regarding the potential for a commercial development. We will review our 50% CCOS assumption once appraisal well data are made available.

Egdon is actively looking to farm-out Resolution to fund a 3D seismic campaign and drilling an appraisal well. We believe this is likely to be in the form of a multi-phase farm-out, based on recent precedents. The term of the Clough Resources farm-out of PL2252 to Shell in February 2019 involved the incoming partner taking a 70% operated stake while paying 100% of 3D seismic and associated costs.

It is uncertain how much working interest/value Egdon would be able to retain through multiple farm-outs in order to fund its share of 3D seismic, the drilling of an appraisal well and ultimately full field development (gross capex mid-case estimated at \$365m). Ahead of farm-out, we use a broadbrush approach assuming 15% value retained through multiple farm-outs, although we expect to refine this estimate once a funding deal has been concluded. Our previously published valuation of Resolution had assumed a higher value retained through farm-out (50%) but lower CCOS (15%) – little detail was available on potential farm-out terms or CPR audited resource at the time.



Changes to valuation and forecasts

Changes to our NAV valuation are highlighted in Exhibit 5 below. Key moving parts across Egdon's producing assets include lower production at Ceres (in H119 and going forward) and to a lesser extent, a reduction in our short-term commodity price deck since our last publication.

Short-term gas price expectations: CY19 reduced to 52.9p/therm (\$7/mcf) down from 58.7p/therm (\$8/mcf), inflated by 2.5% for future forecast periods.

Short term oil price expectations: We have reduced our short-term Brent oil price expectations for CY19 from \$74.4/bbl to \$65.2/bbl and for CY20 from \$75.1/bbl to \$62/bbl based on the EIA's last published short-term oil price forecasts. Our long-term oil price forecasts remains 70\$/bbl Brent inflated by 2.5%.

<u>The removal of Biscathorpe</u> from our risked exploration NAV is in part offset by our increased risked resource valuation for Resolution, as shown in Exhibit 5 below.

Exhibit 5: Chang	es to Egdon valua	ition		
	New valuation (p/share)	Old valuation (p/share)	Change (%)	Reason
Core NAV	1.2	2.7	-126.3%	Lower Ceres production estimates and short-term commodity price deck, NAV rolled forward and cash position lowered. Large decrease in relative terms, but small in absolute terms
Exploration value	10.3	10.0	3%	Biscathorpe exploration removed. Net Resolution risked resource value increased
Total RENAV	11.5	12.7	-10.4%	
Source: Edison Inve	stment Research			

As discussed earlier in this note, we assume that Egdon retains 15% of the net value in Resolution following the combination of appraisal and development farm-outs. We intend to re-visit this assumption once an appraisal farm-out has been concluded.

Edison's indicative shale valuation remains unchanged and is based on acreage. We expect to review the underlying inputs in our UK shale model based on the latest information on potential IP rates, per well EUR and well costs from Cuadrilla, IGas and Egdon.

Assets	Country/	WI	CCoS	Net	NPV/boe	NPV _{12.5}	Risked
\$1.3/£; no of shares in issue: 260m	licence	%	(%)	(mmboe)	(\$/boe)	(\$m)	/share (p)
Net (debt)/cash 31 January 2019						2.3	0.7
G&A (three years)						(3.2)	(0.9)
Production							
Keddington	UK	45%	100%	0.06	(12.5)	(0.8)	0.0
Ceres	UK	10%	100%	0.41	6.9	2.8	0.8
Fiskerton	UK	80%	100%	0.07	1.9	0.1	0.0
Wressle (Ashover Grit)	UK	30%	60%	0.15	22.2	1.9	0.6
Core NAV						3.2	1.2
Exploration							
North Kelsey	UK	80%	12%	4.94	11.3	6.7	2.0
Louth	UK	65%	20%	0.85	10.1	1.7	0.5
Wressle (upside)	UK	30%	25%	0.46	16.7	1.9	0.6
Broughton	UK	25%	23%	0.11	16.7	0.4	0.1
Resolution	UK	15%*	50%	5.56	8.6	23.9	7.1
Appraisal and exploration NAV						34.7	10.3
RENAV						37.9	11.5
Indicative shale valuation P50	UK	50%	67%			344.3	102.3



Key assets include Resolution, which makes up 62% of our conventional NAV and Egdon's option on UK shale gas through its 188,000 net acres of land position. We note that the bulk of our valuation is in exploration and appraisal assets which carry a high level or risk and uncertainty relative to producing assets.

Financials

Key changes to our financials outlined below:

- Commodity price changes are highlighted in the previous section of this note
- Removal of Biscathorpe from our risked conventional valuation (-3.6p.share)
- Reduced production expectations for Ceres in FY19

We have reduced our absolute revenue and cash flow forecasts by £1m and £0.9m, respectively in FY19 due to lower production at Ceres and delays at Wressle. These reductions are small in absolute terms but material in relative terms as highlighted in Exhibit 7.

Egdon ended the period to 31 January 2019 with £1.8m of cash and no debt. Further capital may be required before the end of financial year 2020 (July 2020), based on our forecasts. Key capital intensive activity at Springs Road is covered under existing farm-out arrangements and management expects to bring in a farminee to cover Resolution appraisal costs.

Exhibit 7: Changes to short-term financial forecasts (£m)										
Changes to forecasts	FY18 Actuals	FY19 New	FY20 New	FY19 Old	FY20 Old	% change FY19	% change FY20			
Revenues	0.8	2.2	2.7	3.2	4.2	-43%	-54%			
EBITDA	(2.2)	(0.5)	0.1	0.1	(0.1)	N/M	N/M			
Operational cashflow	(1.6)	(0.3)	0.6	0.6	0.4	N/M	32%			
Source: Edison Investm	nent Research									



£0003		2017	2018	2019e	2020
July	IFRS	IFRS	IFRS	IFRS	IFRS
PROFIT & LOSS					
Revenue	1,586	1,039	779	2,234	2,732
Cost of Sales (inc DD&A)	(3,206)	(1,576)	(1,754)	(2,522)	(2,573
Gross Profit	(1,620)	(537)	(975)	(289)	159
EBITDA	(733)	(1,193)	(2,219)	(466)	9
Operating Profit (before amort. and except.)	(4,571)	(2,121)	(1,656)	(2,021)	(1,772
Intangible Amortisation	0	0	0	0	(
Exceptionals	0	0	0	0	(
Other	0	0	0	0	(
Operating Profit	(4,571)	(2,121)	(1,656)	(2,021)	(1,772
Net Interest	(34)	(42)	(41)	(49)	(52
Profit Before Tax (norm)	(4,604)	(2,163)	(1,697)	(2,070)	(1,824
Profit Before Tax (FRS 3)	(4,604)	(2,163)	(1,697)	(2,070)	(1,824
Tax	0	0	0	0	(
Profit After Tax (norm)	(4,604)	(2,163)	(1,697)	(2,070)	(1,824
Profit After Tax (FRS 3)	(4,604)	(2,163)	(1,697)	(2,070)	(1,824
Average Number of Shares Outstanding (m)	221	249	260	260	26
EPS - normalised (p)	(2.1)	(0.7)	(0.8)	(0.2)	(0.8
EPS - normalised (p) EPS - normalised fully diluted (p)	(1.2)	. ,	(0.8)	(0.2)	
		(0.7)			(0.3
EPS - (IFRS) (p)	(2.1)	(0.9)	(0.7)	(0.8)	(0.7
Dividend per share (p)	0.0	0.0	0.0	0.0	0.0
Gross Margin (%)	-102.1	-51.7	-125.2	-12.9	5.8
EBITDA Margin (%)	-46.2	-114.8	-284.9	-20.9	3.
Operating Margin (before GW and except.) (%)	-288.2	-204.1	-212.7	-90.5	-64.9
BALANCE SHEET					
Fixed Assets	27,053	28,495	30,105	30.875	31,44
Intangible Assets	18,370	19,231	19,572	20,854	21,554
Tangible Assets	8,683	9,264	10,534	10,021	9,894
Investments	0,003	9,204	0	0	9,09
Current Assets	5,270	7,613	4,020	4,399	3,43
Stocks	0	0	4,020	4,399	
					2.40
Debtors October 1987	2,541	1,507	1,240	3,406	3,406
Cash	2,679	6,057	2,772	993	29
Other	50	50	0	0	(0.007
Current Liabilities	(1,085)	(1,216)	(1,150)	(2,827)	(2,827
Creditors	(1,085)	(1,216)	(1,150)	(2,827)	(2,827
Short term borrowings	0	0	0	0	(
Long Term Liabilities	(1,803)	(2,187)	(2,249)	(2,763)	(2,763
Long term borrowings	0	0	0	(417)	(417
Other long term liabilities	(1,803)	(2,187)	(2,249)	(2,346)	(2,346
Net Assets	29,435	32,705	30,727	29,684	29,292
CASH FLOW					
Operating Cash Flow	(159)	(422)	(1,629)	(327)	59
Net Interest	0	0	0	(26)	(52
Tax	0	0	0	0	(02
Capex	(2,379)	(1,054)	(1,825)	(1,423)	(1,504
Acquisitions/disposals	0	0	137	0	(1,00-
Equity Financing	0	4,865	0	0	
Other cash flow	8	5	8	3	
Other cash flow Net Cash Flow	(2,529)			(1,773)	
Net Cash Flow Opening net debt/(cash)		3,394	(3,308)		(965
, , ,	(5,180)	(2,678)	(6,056)	(2,771)	(576
HP finance leases initiated	(20)	0	0	0	
Other	(28)	16	(23)	423	(
Closing net debt/(cash)	(2,678)	(6,056)	(2,771)	(576)	389



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