

HEDGEYE

HEDGEYE LIVE 2024

Global Energy

The Tales of Oil's Demise Have Been Greatly Exaggerated (for some)

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HEDGEYE ENERGY

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Please submit questions* to
qa@hedgeye.com

*Answered at the end of the call

1 Experience

- 6.5 years as head of integrated oil & gas, refining and oil commodities in the Americas for Bloomberg Intelligence
- 7 years at Citi Research.
 - 3 years global O&G and US refining in New York
 - 4 years Latin American O&G, petrochemicals in Rio de Janeiro, Brazil (3 of those years in Ipanema beach!)
- 3 years in investment banking with over \$1.1 billion of transactions closed in the transportation sector. Spent time in London/New York

2 Key Insights

- As a native Brazilian, I look at energy from the perspective of Emerging Markets – affordability and abundance are critical to long-term cycles
- The industry's first principle is to provide low-cost of energy to the world
- Balance sheets rule the day in energy. Getting ahead of your skies will eventually lead you into trouble
- Critical to discern full-cycle costs from half-cycle costs in energy developments. Low full cycle costs are ideal. But half-cycle costs are important in a rising interest rate environment

3 Personal

- I've never played hockey and only ice skated once in my life. I filled out the required *Non-Hockey Person* disclosure form to Jonesy prior to joining
- I have a one year-old daughter
- My wife recruited me to my job at Bloomberg, but we only met after she left the firm
- I was a Hedgeye subscriber for several years prior to joining
- I am a lifelong supporter of Flamengo in Brazil and later on of Arsenal in England

1 Weekly Products

The Energy Show – Dissecting the week’s news, EIA inventories and more

Company Refining Margin Changes – A detailed look at how margins are shifting for US refiners by reporting region

Outlook on US shale short-term production – Updates on wells completed, frac crew productivity

2 Quarterly Products

OPEC+ meeting previews / reviews – expectations of

RIN (renewable fuel credit) market outlook / balance – views on each of the main RIN categories

Quarterly round-up of sector earnings outlining key changes and emerging trends in major energy sectors

3 Yearly Products

Tactical allocation of energy subsectors based on macro framework

Update on global energy supply and demand balances and outlook

Global refining capacity additions and utilization expectations

Time to Turn Back to Traditional Energy



Global Energy and Big Oil are near an inflection point

1 We Overhyped the Energy Transition and the Time to Pay Is Coming

The costs of transitioning the world economy to renewables are untenable, especially in a world of rampant inflation and higher rates to counter them

Oil companies that went heavily into the transition are already missing targets and will likely lag peers that stayed focused

There may not be a short-term energy crisis, as demand could fall if prices rise, but we are undersupplied long-term

2 Economics of Oil Are Changing, Fast

US shale growth was critical to keeping global oil prices and US natural gas down over the past decade

Consolidation, maturing regions and stringent regulations are creating bottlenecks for US shale growth

OPEC+ has spare capacity for the short-term, but long-term investment in the industry is down sharply

3 The Old Long Chevron, Short Exxon Trade Is Over

Chevron outperformed ExxonMobil for the last fifteen years, in large part due to better portfolio management and a tighter grip on costs. We think Exxon's CEO Darren Woods has turned that ship around with smart investments since 2015

Exxon's base business is best-in-class and it's adding to the two best growth prospects globally (Pioneer and Guyana)

The potential preemption of Chevron's purchase of Hess in Guyana could be much better than old wall expects

Hedgeye Energy Position Monitor – Best Idea List

HEDGEYE ENERGY POSITION MONITOR													
BEST IDEAS - LONG					TREND	TAIL	BEST IDEAS - SHORT					TREND	TAIL
Best Idea Longs		Mkt. Cap (\$MM)	30d ADV \$ (MM)	Short Interest %			Best Idea Shorts		Mkt. Cap (\$MM)	30d ADV \$ (MM)	Short Interest %		
XOM	ExxonMobil	\$464,198	\$1,954	5%	✓	✓	BP	BP Plc	\$106,765	\$256	1%	✓	
LONG BIAS					SHORT BIAS								
Best Idea Longs		Mkt. Cap (\$MM)	30d ADV \$ (MM)	Short Interest %			Best Idea Shorts		Mkt. Cap (\$MM)	30d ADV \$ (MM)	Short Interest %		
CVX	Chevron	\$295,454	\$1,343	5%	✓		SHEL	Shell Plc	\$218,540	\$236	2%	✓	

Hedgeye’s “Bias” lists represent Hedgeye’s outlook on companies currently under Hedgeye’s review, or for which timing is not right for greater coverage. Hedgeye may or may not provide further commentary on any or all companies represented on this list and representation of a company on the bench does not forecast whether Hedgeye will or will not issue any additional material on that company

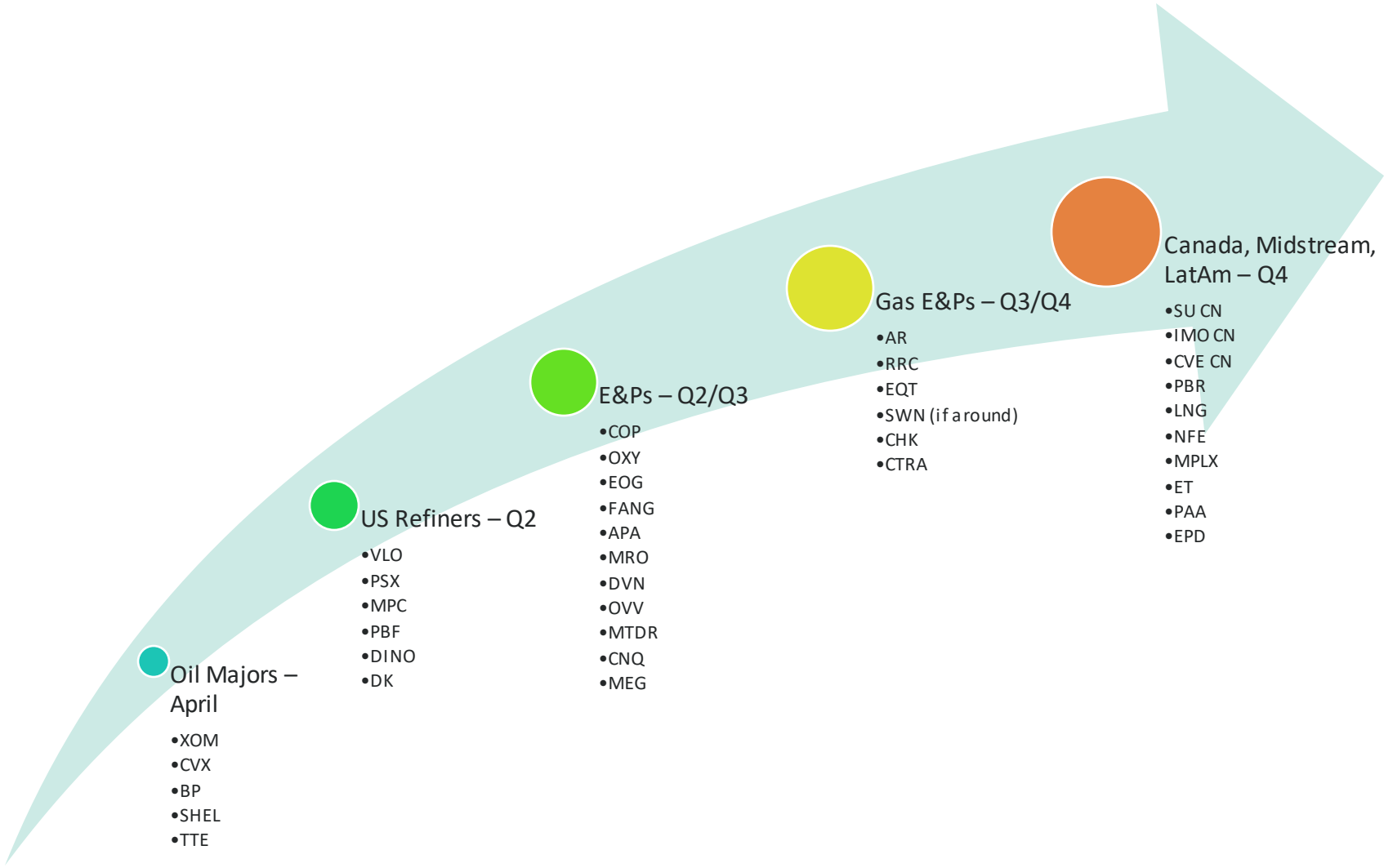
Hedgeye Energy Position Monitor – Idea Sourcing List

Hedgeye Energy Idea Sourcing List

	Ticker	Price	MktCap
		Local	(\$mm)
Integrated Oil & Gas			
Saudi Aramco	ARAMCO AI	30.9	1,990,641
Petrobras	PBR	14.9	96,411
Ecopetrol	EC	11.1	22,707
YPF	YPF	20.7	8,098
Repsol	REP SM	15.4	20,271
ENI	ENI IM	14.5	53,217
Galp	GALP PL	15.2	12,726
Suncor Energy	SU CN	49.9	47,343
Cenovus Energy	CVE CN	27.0	37,107
Imperial Oil	IMO CN	93.8	37,011
TotalEnergies	TTE FP	63.2	163,501
OilE&Ps			
Pioneer Natural Resources	PXD	259.6	60,602
EOG Resources	EOG	126.8	73,538
Hess	HES	152.3	46,752
Canadian Natural Resources	CNQ CN	102.6	80,875
MEG Energy	MEG CN	31.3	6,289
ConocoPhillips	COP	125.9	147,939
Equinor	EQNR NO	291.0	81,614
APA Corporation	APA	34.6	10,438
Devon Energy	DVN	49.0	31,137
Diamondback Energy	FANG	196.3	35,042
Marathon Oil	MRO	27.7	16,011
Occidental Petroleum	OXY	64.9	57,036
Matador Resources	MTDR	69.0	8,249
Enauta	ENAT3 BZ	28.3	1,506
LatAm Fuel Distribution			
Vibra Energia	VBBR3 BZ	25.2	5,891
Ultrapar	UGP	5.6	6,269

	Ticker	Price	MktCap
		Local	(\$mm)
Refiners			
Valero Energy	VLO	170.8	56,811
Marathon Petroleum	MPC	201.5	72,590
Phillips 66	PSX	158.4	67,823
PBF Energy	PBF	56.8	6,797
HF Sinclair	DINO	61.8	12,272
Delek US	DK	31.0	1,987
CVR Energy	CVI	36.2	3,642
Par Pacific	PARR	38.3	2,274
Midstream			
MPLX	MPLX	40.7	41,182
Energy Transfer	ET	15.6	52,537
Enterprise Partners	EPD	29.0	62,847
Kinder Morgan	KMI	18.0	39,982
TC Energy	TRP CN	55.1	42,121
Enbridge	ENB CN	48.5	75,966
Plains All American	PAA	17.2	12,086
Williams Corporation	WMB	38.4	46,824
Delek Logistics	DKL	40.8	1,927
Oneok	OKE	79.5	46,390
Targa Resources	TRGP	111.7	24,944
Cheniere Energy	LNG	160.0	37,565
Tellurian	TELL	0.5	394
New Fortres Energy	NFE	29.6	6,076
Gas E&Ps			
Antero Resources	AR	27.5	8,380
Chesapeake Energy	CHK	86.5	11,358
EQT Resources	EQT	34.8	15,359
Range Resources	RRC	33.4	8,126
Southwestern Resources	SWN	7.3	8,096
Cetera Energy	CTRA	27.8	20,973

Hedgeye Energy Planned Rollout (subject to change)



Highest/Lowest Expected Values By Quad Regime

Quad 1: Goldilocks

Best Asset Classes:

Equities, Credit, Commodities, FX

Worst Asset Classes:

Fixed Income, USD

Best Equity Sectors:

Tech, Consumer Discretionary, Materials, Industrials, Telecom

Worst Equity Sectors:

Utilities, REITS, Consumer Staples, Financials, Energy

Best Equity Style Factors:

High Beta, Momentum, Leverage, Secular Growth, Mid Caps

Worst Equity Style Factors:

Low Beta, Defensives, Value, Dividend Yield, Small Caps

Best Fixed Income Sectors:

BDCs, Convertibles, HY Credit, EM \$ Debt, Leveraged Loans

Worst Fixed Income Sectors:

TIPS, Short Duration Treasuries, MBS, Treasury Belly, Long Bond

Quad 2: Reflation

Best Asset Classes:

Commodities, Equities, Credit, FX

Worst Asset Classes:

Fixed Income, USD

Best Equity Sectors:

Tech, Consumer Discretionary, Industrials, Energy, Financials

Worst Equity Sectors:

Telecom, Utilities, REITS, Consumer Staples, Health Care

Best Equity Style Factors:

Secular Growth, High Beta, Small Caps, Cyclical Growth, Momentum

Worst Equity Style Factors:

Low Beta, Dividend Yield, Value, Defensives, Size

Best Fixed Income Sectors:

Convertibles, BDCs, Preferreds, Leveraged Loans, HY Credit

Worst Fixed Income Sectors:

Long Bond, Treasury Belly, Munis, MBS, IG Credit

Quad 3: Stagflation

Best Asset Classes:

Gold, Commodities, Fixed Income

Worst Asset Classes:

Credit

Best Equity Sectors:

Utilities, Tech, Energy, Industrials, Consumer Discretionary

Worst Equity Sectors:

Financials, REITS, Materials, Telecom, Consumer Staples

Best Equity Style Factors:

Secular Growth, Momentum, Mid Caps, Low Beta, Quality

Worst Equity Style Factors:

Small Caps, Dividend Yield, Value, Defensives, Size

Best Fixed Income Sectors:

Munis, EM \$ Debt, Long Bond, TIPS, Treasury Belly

Worst Fixed Income Sectors:

BDCs, Preferreds, Convertibles, Leveraged Loans, HY Credit

Quad 4: Deflation

Best Asset Classes:

Fixed Income, Gold, USD

Worst Asset Classes:

Commodities, Equities, Credit, FX

Best Equity Sectors:

Consumer Staples, Utilities, REITS, Health Care, Telecom

Worst Equity Sectors:

Energy, Tech, Industrials, Financials, Materials

Best Equity Style Factors:

Low Beta, Dividend Yield, Quality, Defensives, Value

Worst Equity Style Factors:

High Beta, Momentum, Leverage, Secular Growth, Cyclical Growth

Best Fixed Income Sectors:

Long Bond, Treasury Belly, IG Credit, Munis, MBS

Worst Fixed Income Sectors:

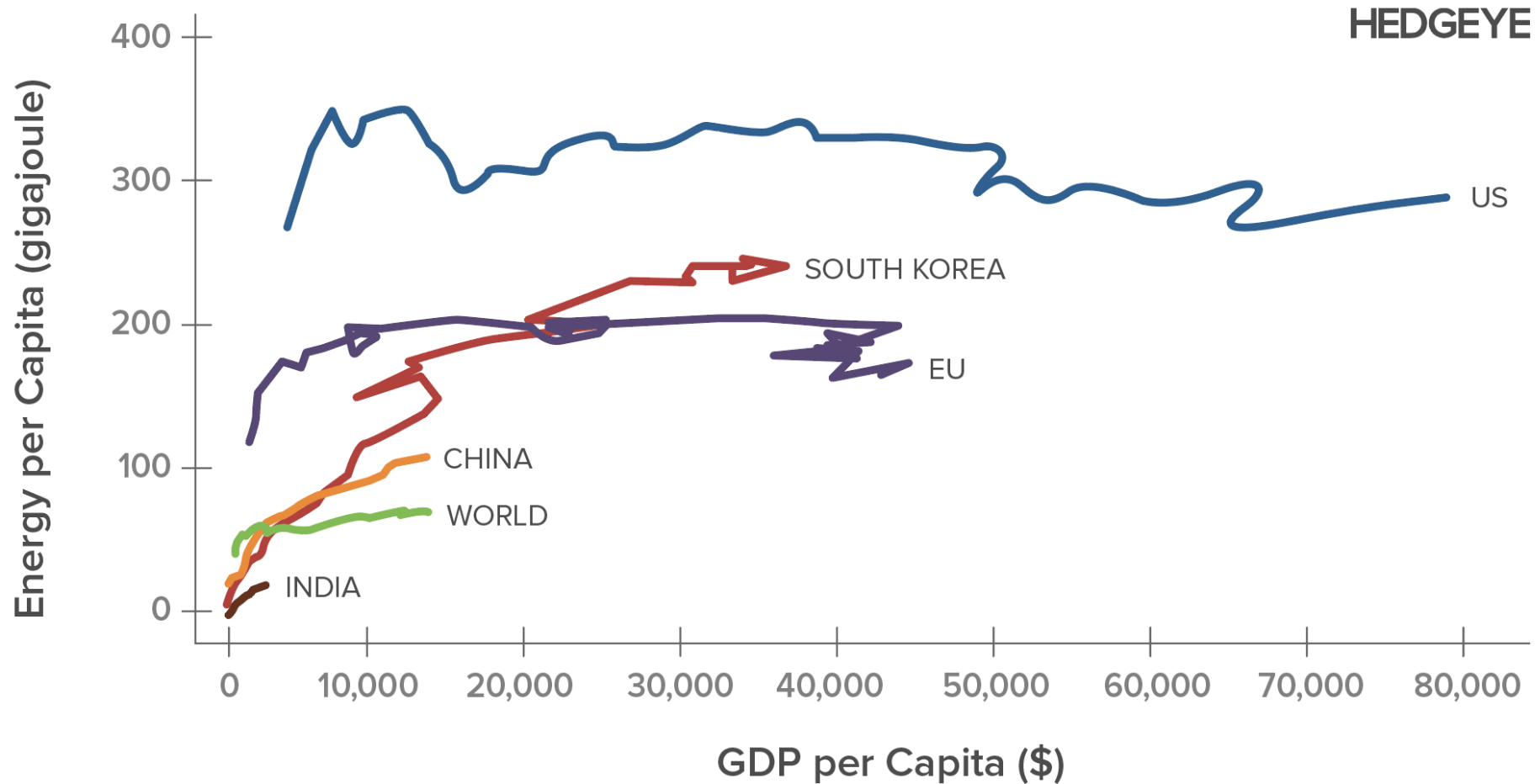
Preferreds, EM Local Currency, BDCs, Leveraged Loans, TIPS

Energy Cost Will Be a Divider in Recovery and Growth

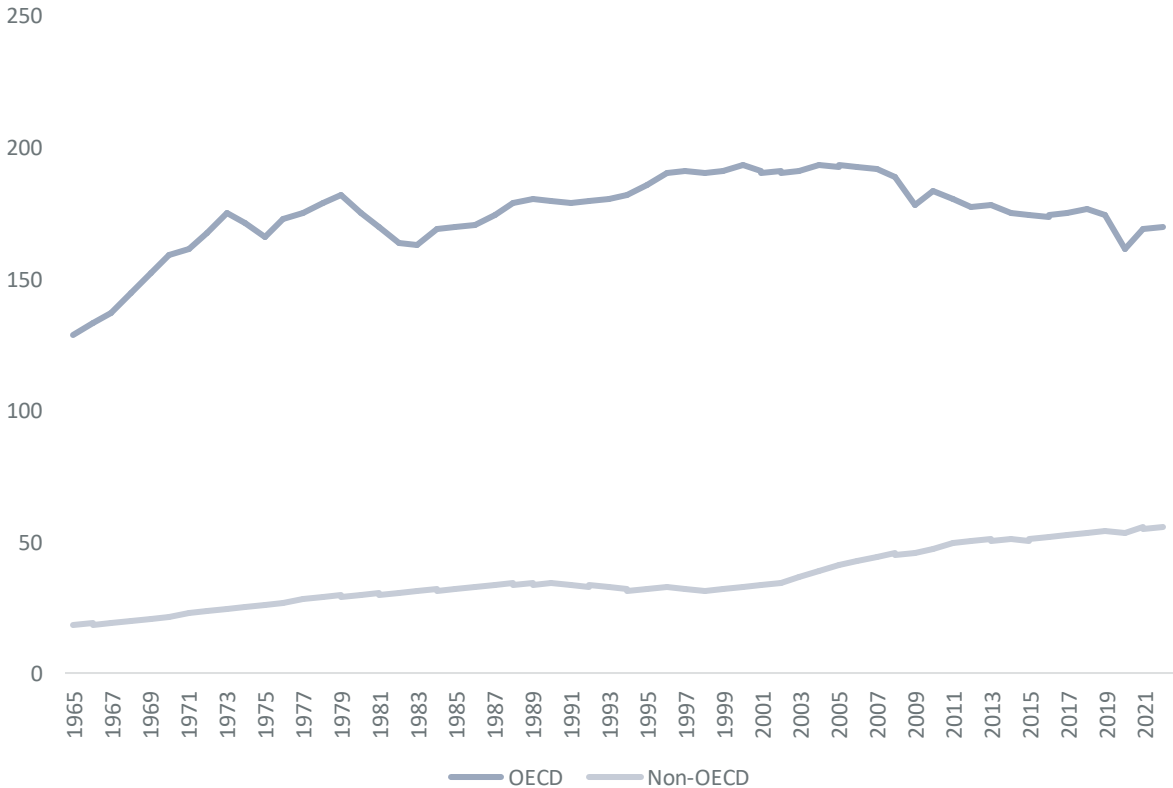
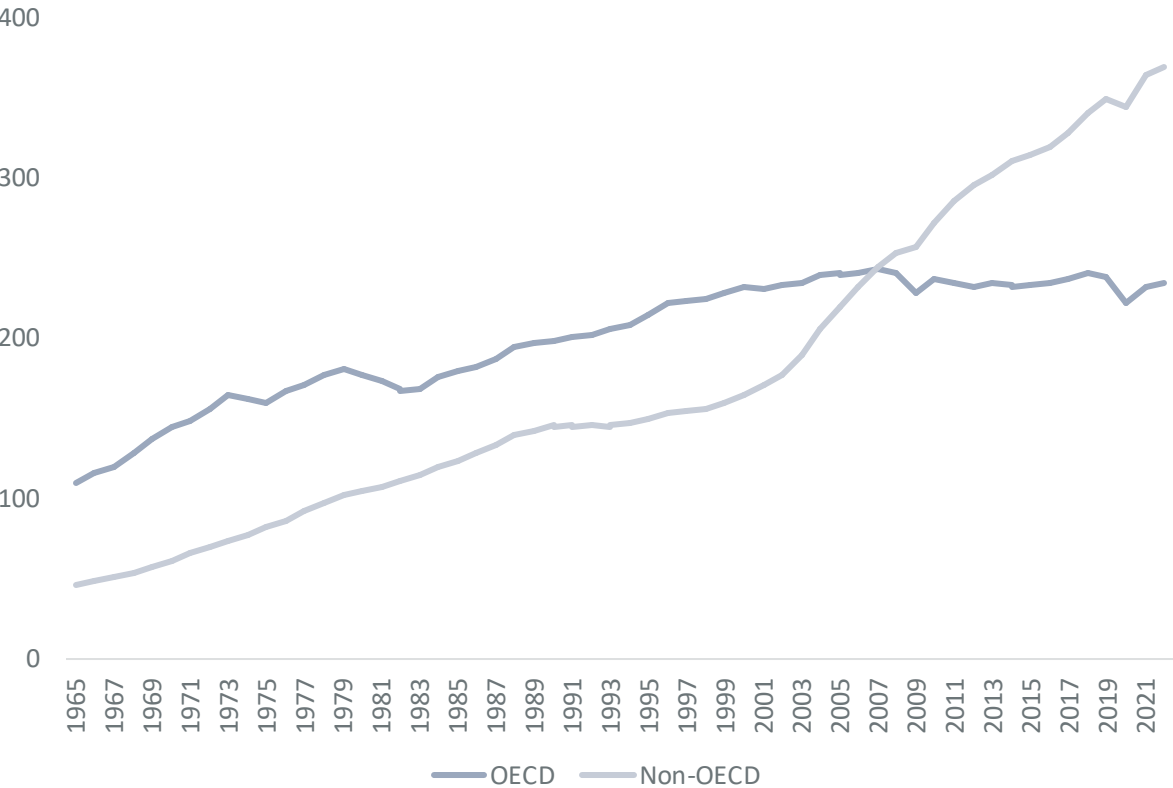


The Most Important Chart in Energy

The world needs energy to grow, improve standards of living



EM Drives Energy Demand and Still Has Ways to Go

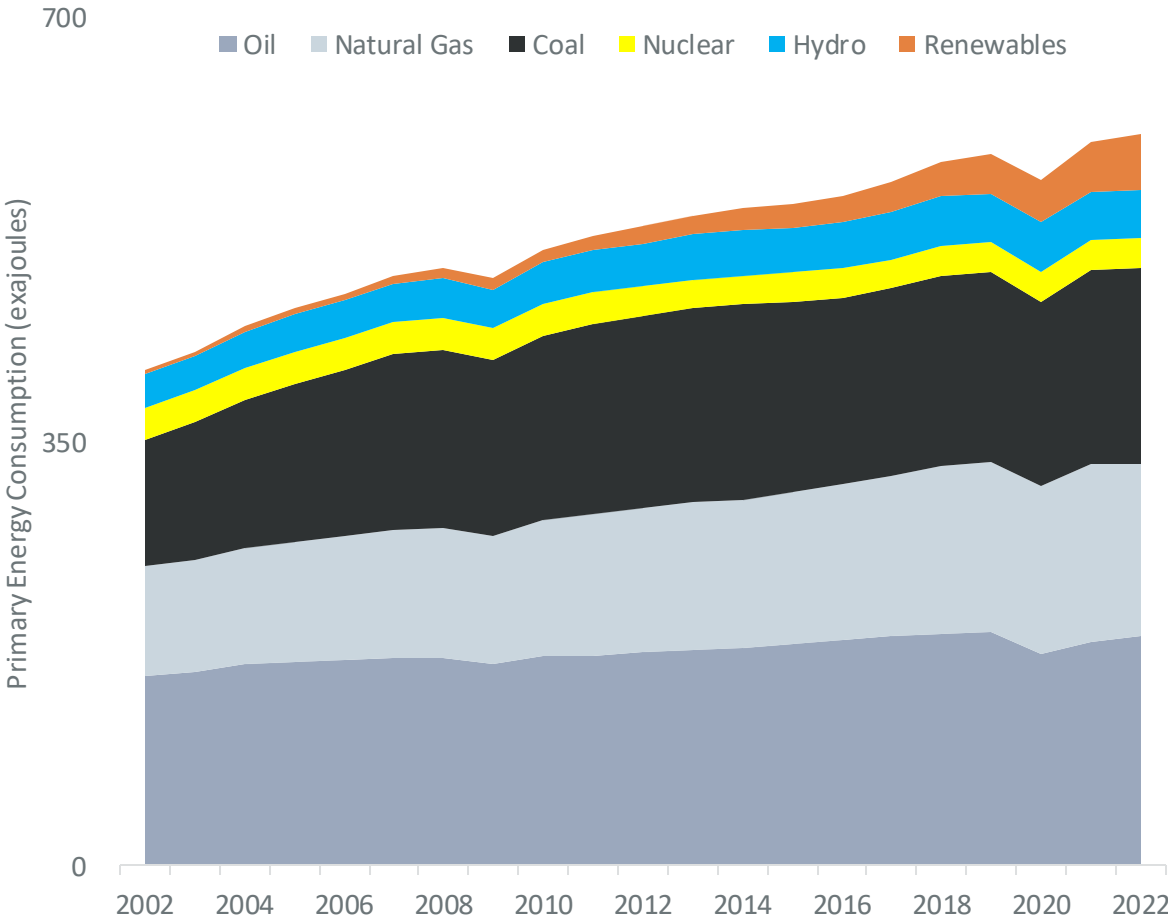


Emerging markets’ energy demand is over 50% larger than Developed Markets. EM can’t afford renewable energy like Developed Markets.

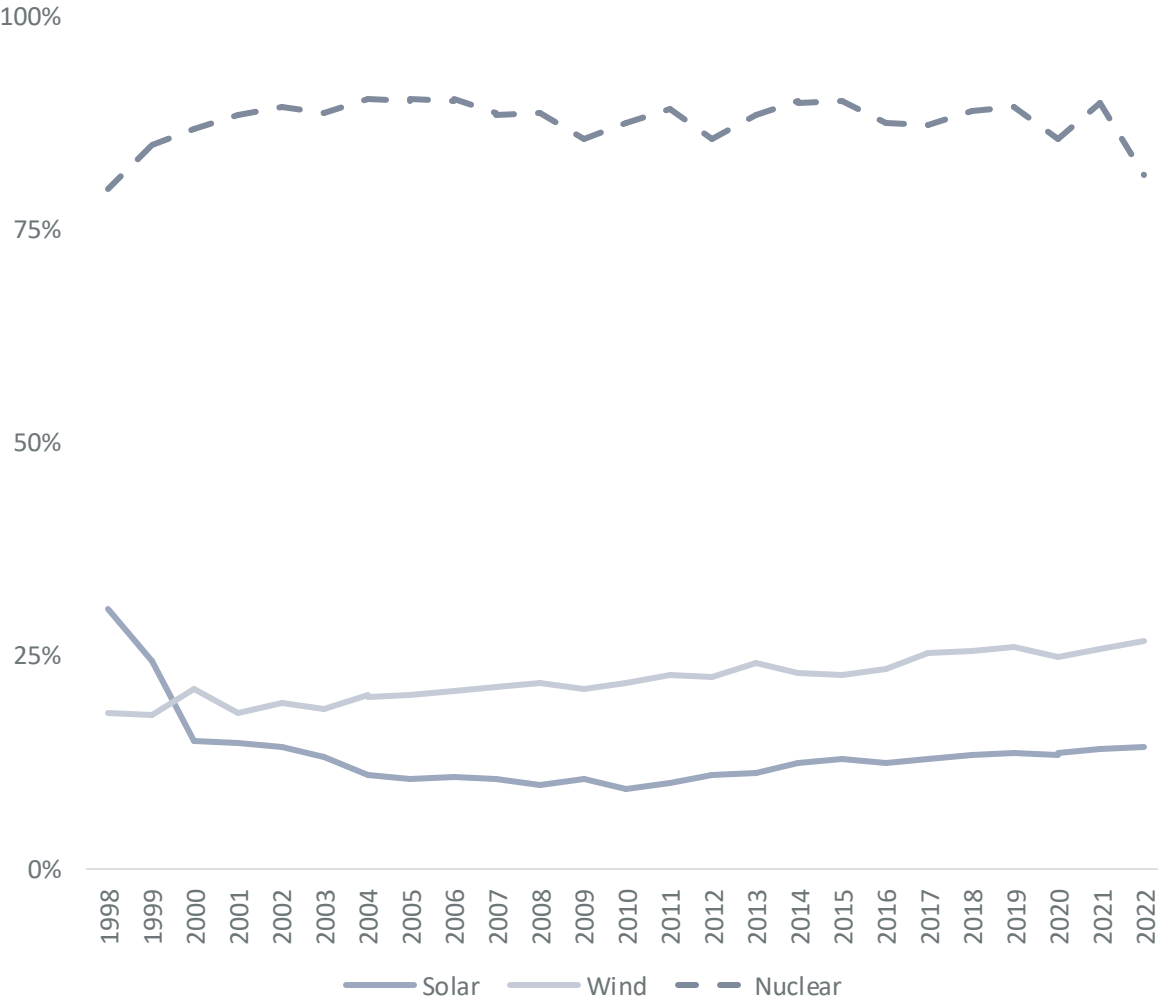
And their demand per capita is still ONE THIRD of Developed Markets (a quarter vs. US energy per capita)

Renewable Energy Is Not Going to Save Us

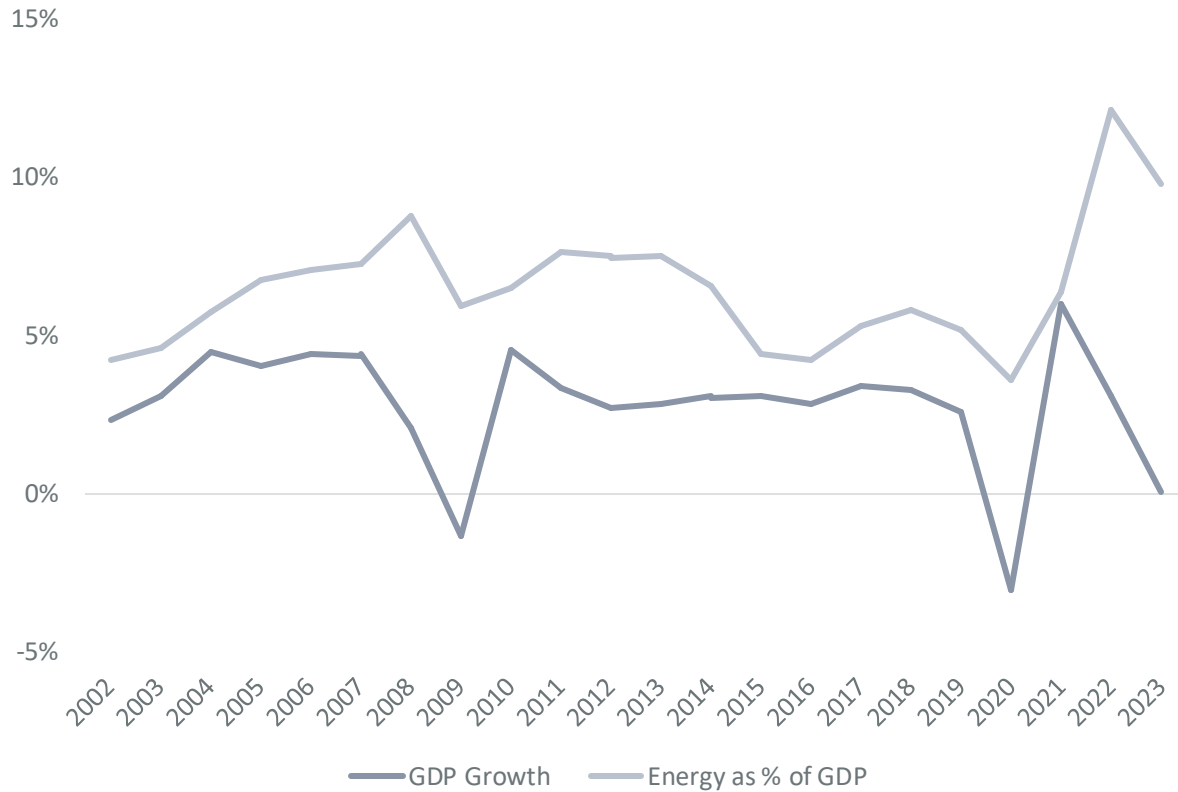
Same Share For Fossils, Despite Renewables Spend



Low Utilization Factors Weigh on Renewables



Energy Is Large in GDP, But Small Part of Indices

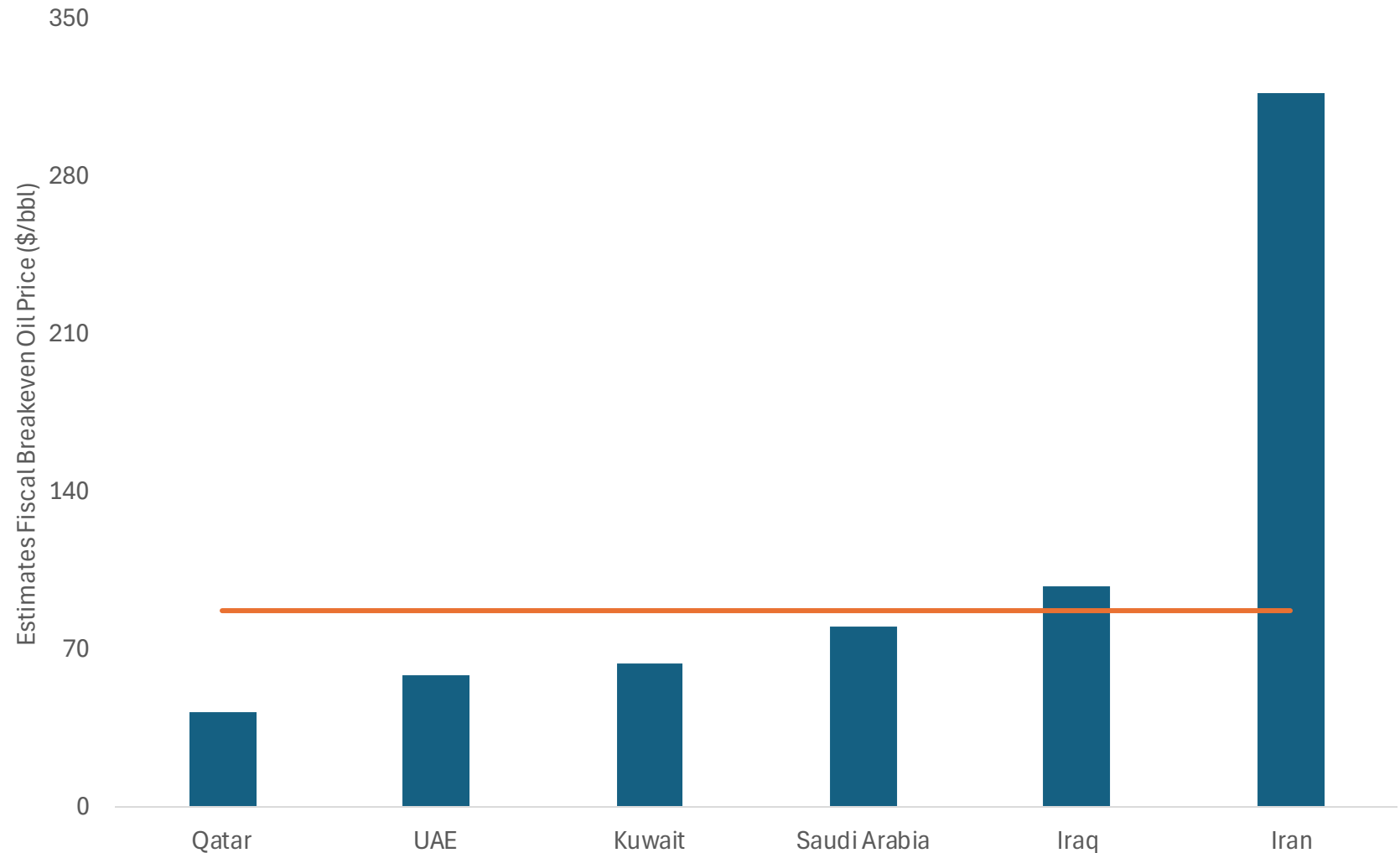


Energy was over 10% of global GDP for the first time in over 20 years. High energy is a major headwind to global growth. “The cure for high oil prices is high oil prices.”

But Energy is only 3.8% of the S&P 500 – investors think peak oil is coming sooner than its economically viable.

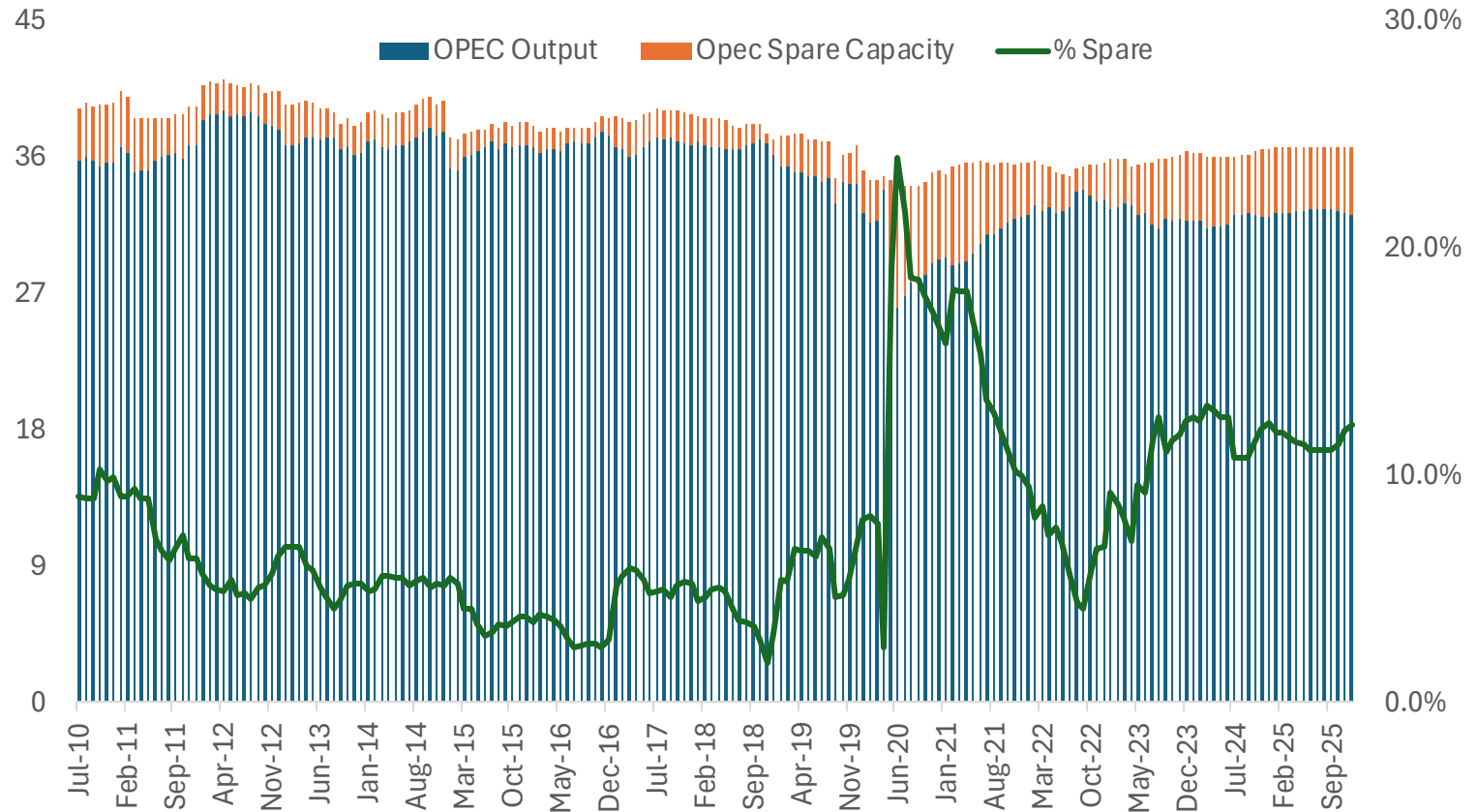
Saudi's High Fiscal Breakeven Could Break OPEC+

- Saudi Arabia is shouldering the bulk of oil production cuts
- High fiscal breakeven is getting even higher as it implements *Vision 2030*
- There are disagreements between UAE and Saudi on Growth. Iraq also wants to increase its oil output and exports
- Russia's crude exports are likely to rise as Ukraine targets its oil refineries
- Despite sanctions, Iran oil exports are still going strong



But Limited Room to Grow in the Long-Term

- Spare capacity is slightly elevated at 4.5 million barrels-a-day
- But likely only 1.6-2 million barrels-a-day of sustainable increases
- Saudi Arabia recently cancelled plans to increase capacity by 1 mbbl/d to lower costs
- UAE and Iraq have room to grow, but opposition from other members due to price pressure



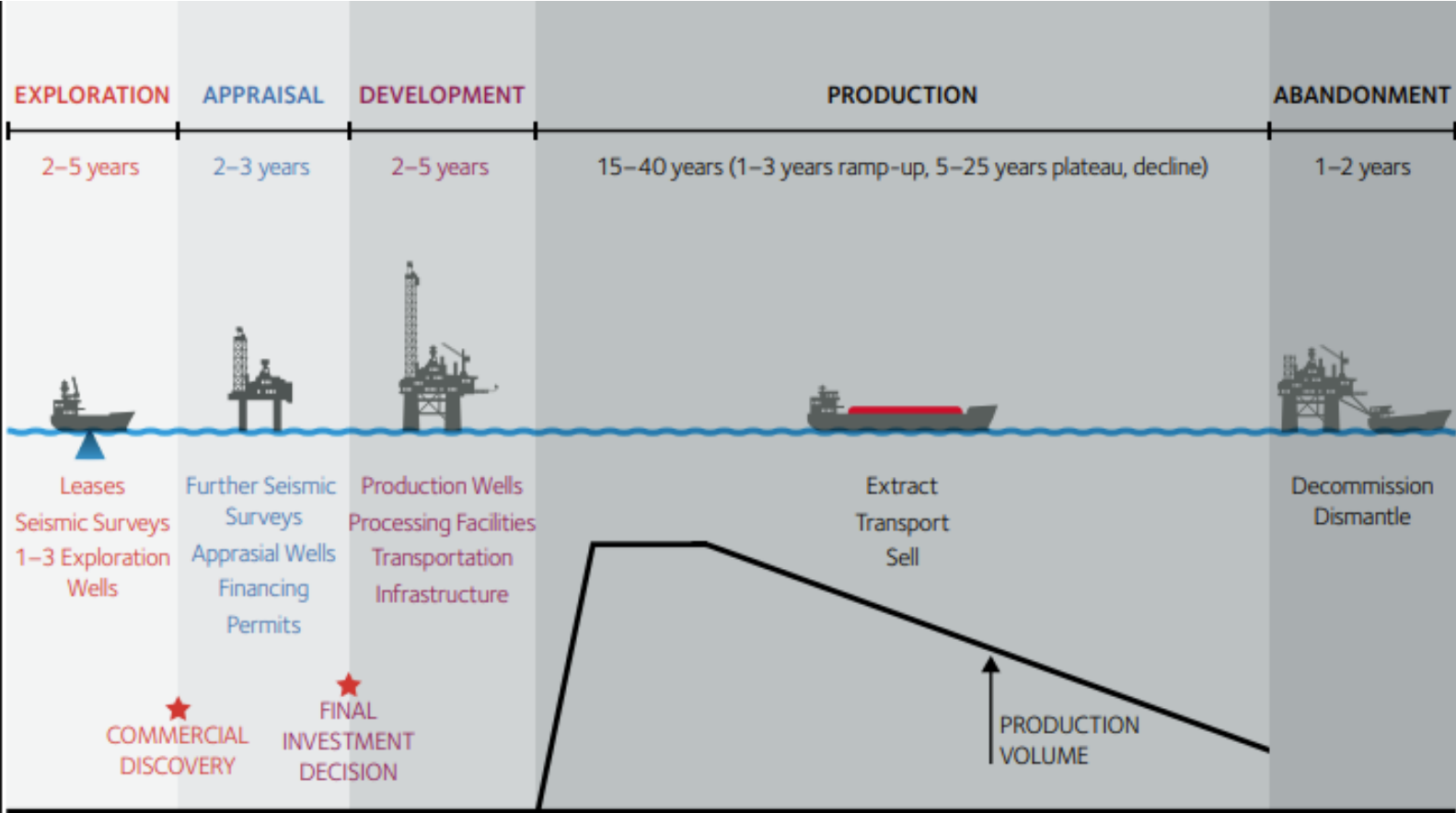
HEDGEYE

**Capital, capital, capital –
Allocation is critical to
long-term performance**



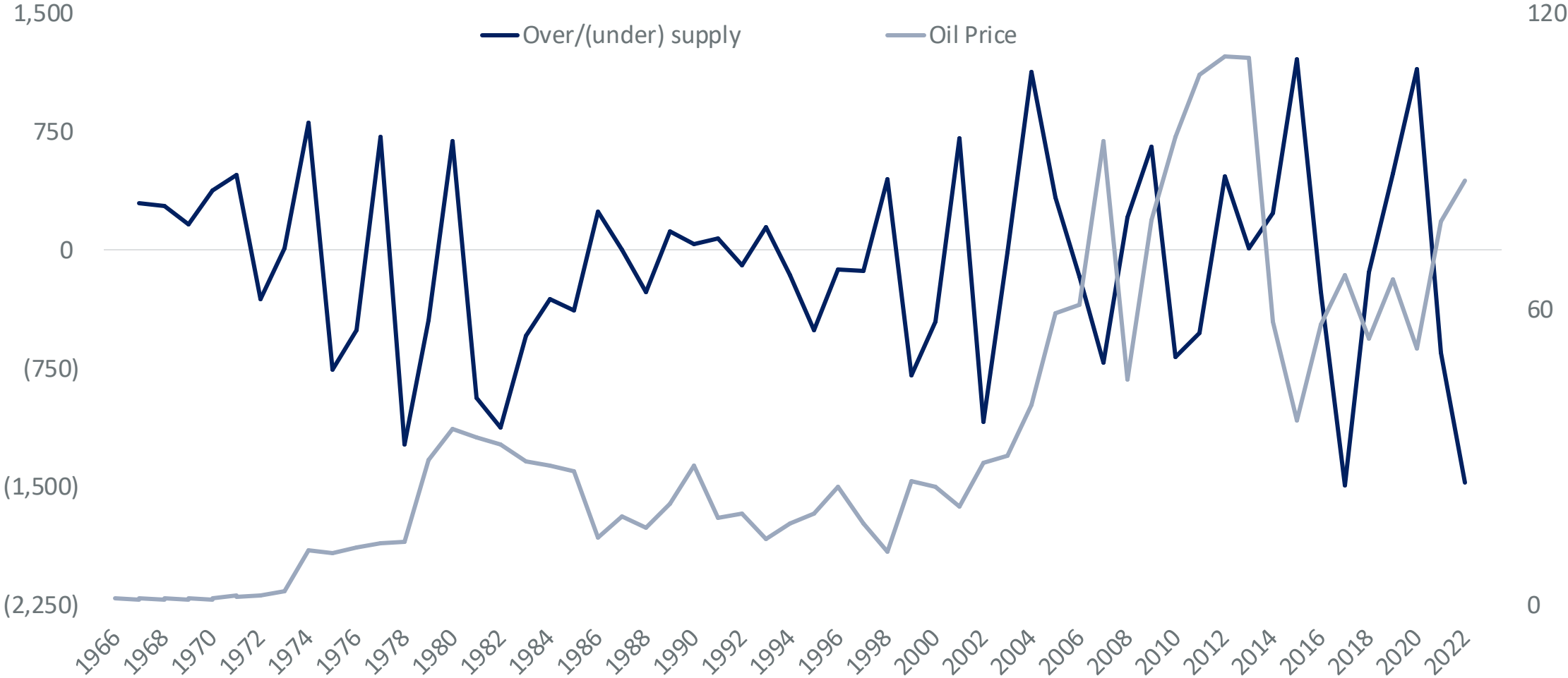
It Takes a Long Time to Shift Strategy in Oil

Capital allocation is key and US Majors are doing it far better than Europeans



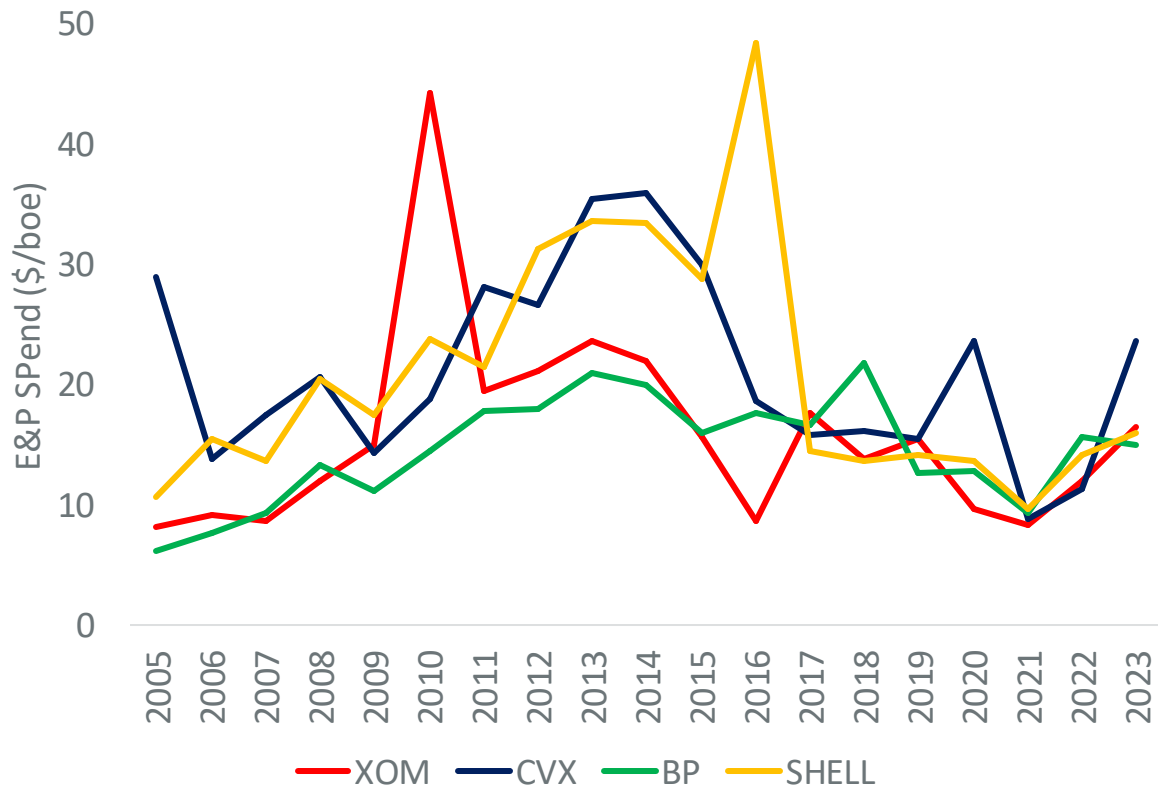
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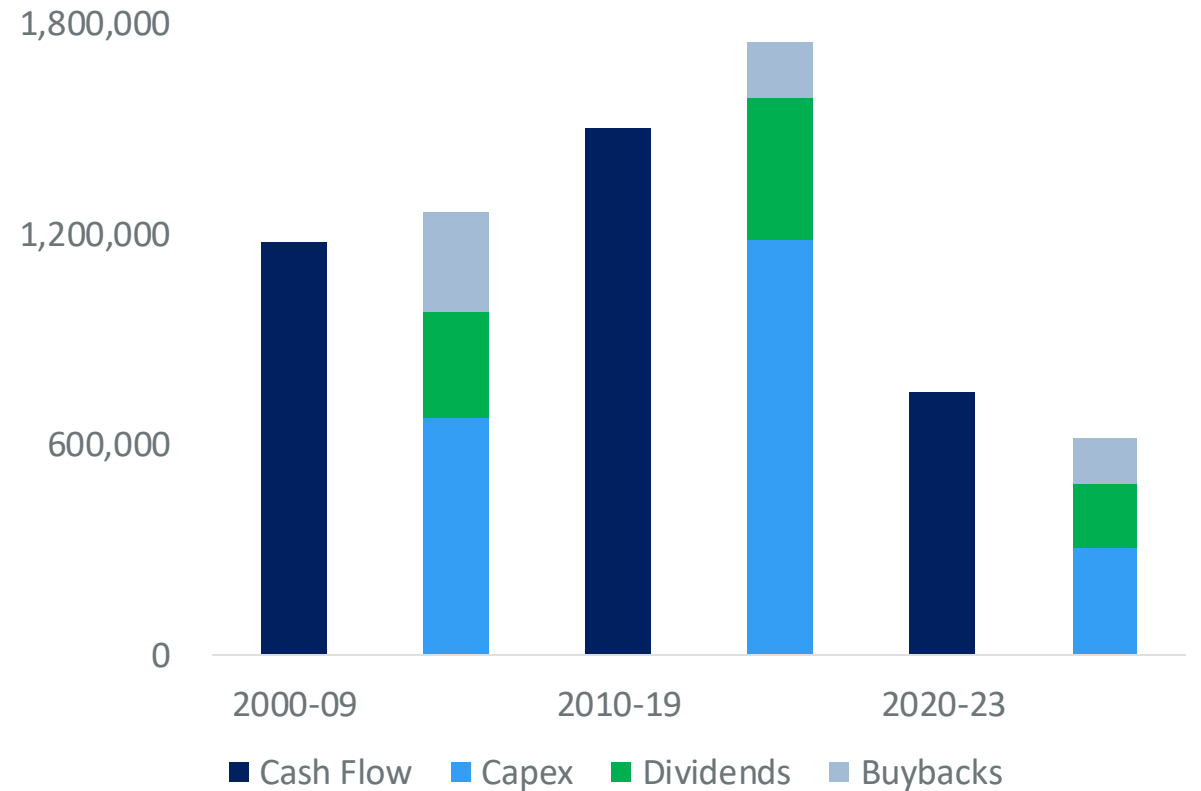
Oil Majors Must Balance Spending and Distributions

Big Oil Upstream Spending (\$/boe)



BP output reflects impairment of stake in Rosneft in 2022

Big Oil Sources and Uses of Cash

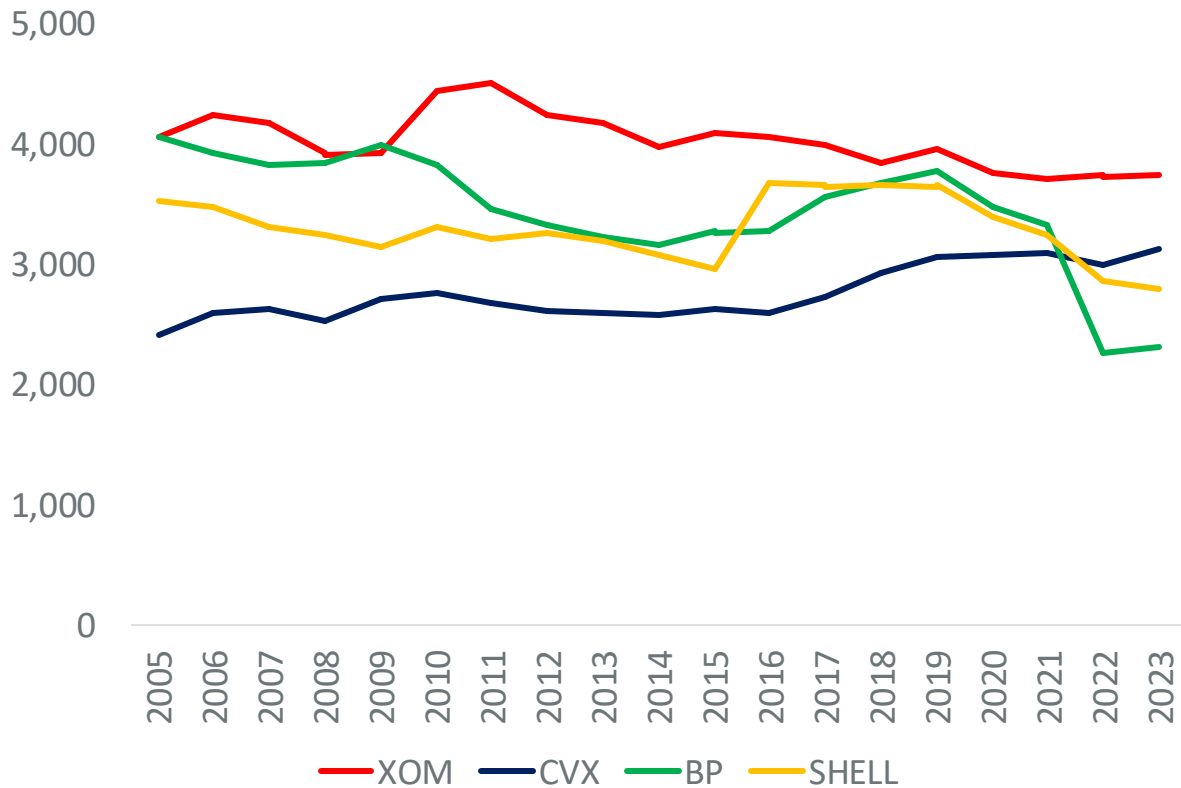


Big Oil spent outside of its means in 2000-19 and even then production declined for the group as a whole.

In four years (2020-23) the group (XOM, CVX, BP, SHEL and TTE) generated 40% more free cash flow than the entire prior decade and kept its distributions within organic cash flow.

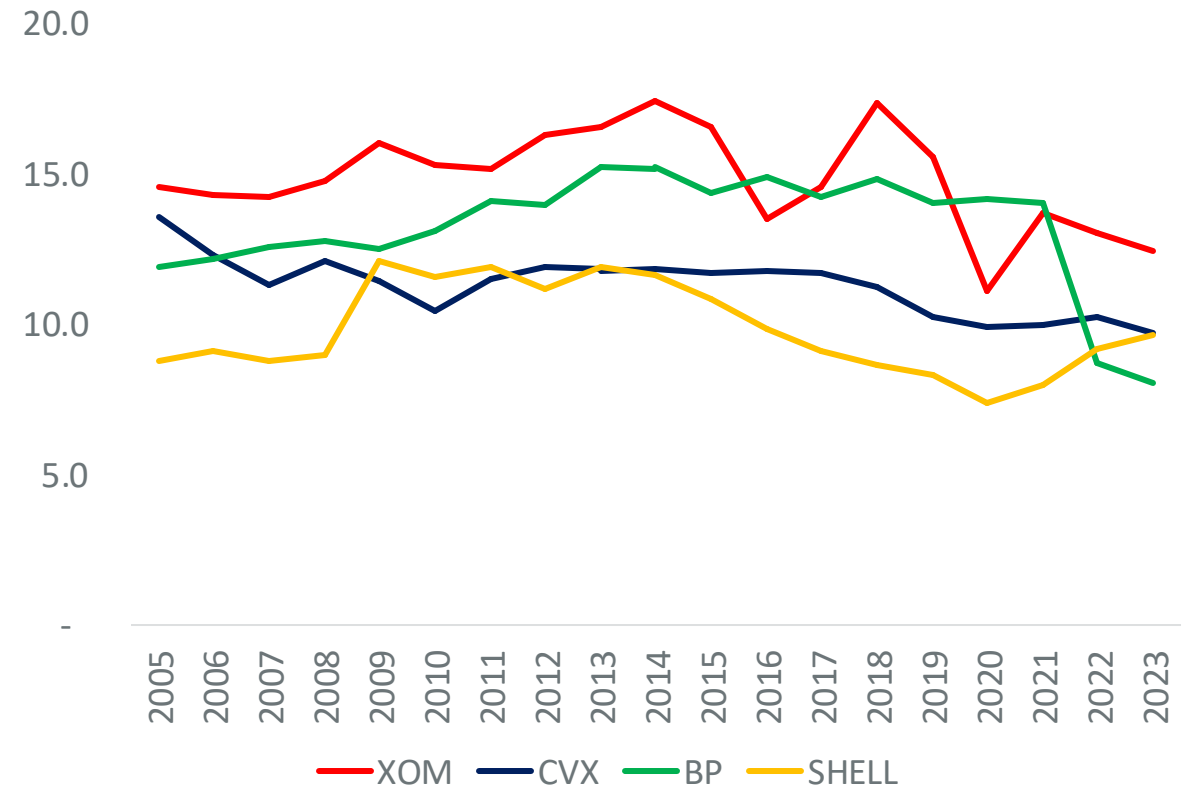
Despite Hefty Investment Big Oil Production Falling

US Majors Production Recovering, Euros' Falling



BP output reflects impairment of stake in Rosneft in 2022

Big Oil Proved Reserve Life (years)



European's output down sharply as BP writes-off Rosneft, and BP/Shell focus on upstream asset sales and renewables
 Chevron's acquisitions and investments paying off as production rises to 2nd place in the peer group
 Exxon's output stabilizes after years of malinvestment. PXD deal and Guyana growth put it on path to new records

Europeans Went Hard on Renewables Push

BP Planned to Lower Its Oil & Gas Output 42% by 2030

...will create a very different company in 2030

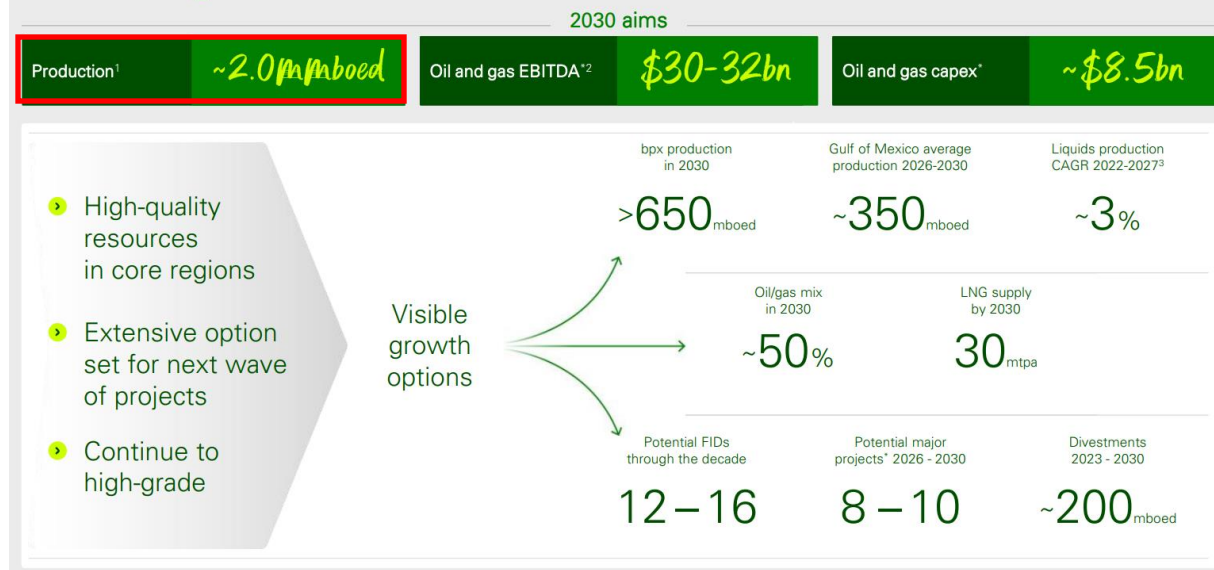


2019		2030 Aims
2.5GW / 250TWh	Developed renewables and traded electricity ¹	50GW developed / 500TWh traded
22Kbd	Bioenergy	>100Kbd developed / 20% biojet market share
0.6 Mte in our operations	Hydrogen	10% share in core markets
10m	Customer touchpoints per day	>20m
>7,500	EV charging points	>70,000
~2.6mmbaed	Oil and gas production	~1.5mmbaed
~360Mte	Aim 2 emissions	~235Mte
0	Partnerships with cities and industry	10-15 city partners 3 industry sectors
8.9%	ROACE ²	12-14%

(1) Traded electricity may include electricity sourced from the grid
 (2) ROACE: return on average capital employed as defined in bp's 2019 annual report

But narrowed that view in 2023 to a "modest" 23% cut

Sustaining EBITDA 2026-2030

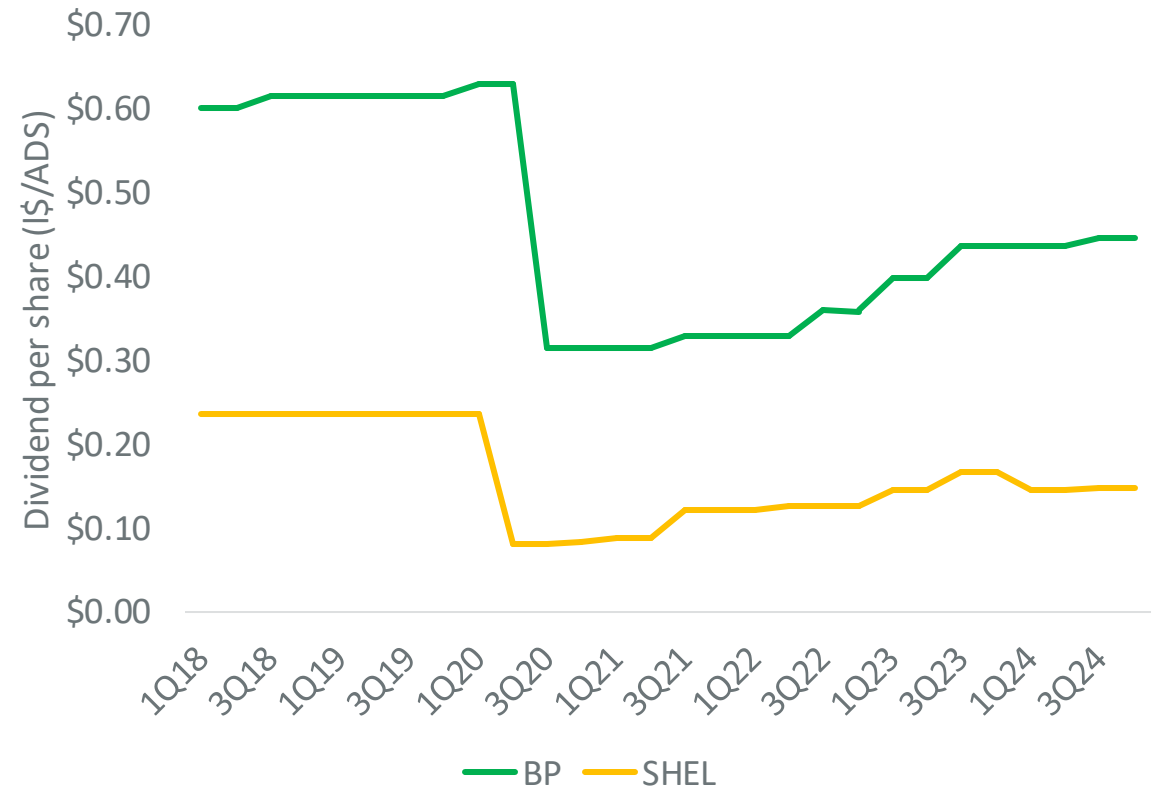
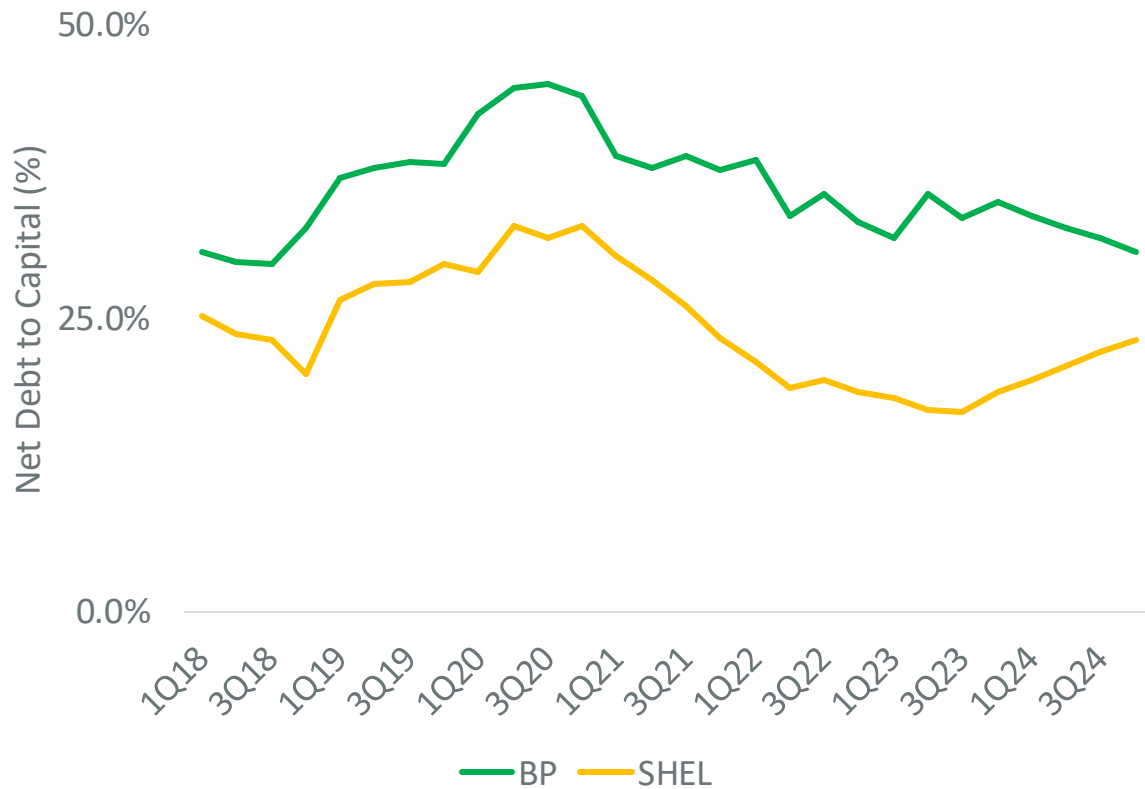


BP raised its 2030 oil & gas production target from 1.5 million boe/d to 2 million boe/d (current 2.26 mboe/d)

But lack of investment in the portfolio could mean that their cost basis is not attractive vs. peers

About one third of the natural gas contracts are fixed rate at a low-interest rate, low European gas market

But Had to Cut Their Dividends Drastically



BP and Shell both cut their dividends sharply in 2020 due to the pandemic. But their leverage was rising as they pursued an energy transition strategy

Dividends are rising, but so is leverage. New projects can't sustain old payout ratios

They are missing out on the mega-deals

Target	Proposed Acquirer	EV (\$ millions)	Output (kboe/d)	% Liquids	Region	Date	Type
Noble Energy	Chevron	13,000	361	57%	Diversified	Jul-20	Equity
Concho Resources	ConocoPhillips	9,700	331	63%	Permian	Oct-20	Equity
Shell's Permian	ConocoPhillips	9,500	200	57%	Permian	Dec-21	Cash
BlackSwan Oil & Gas	Ovintiv	4,275	75	80%	Permian	Apr-23	Cash
PDC Energy	Chevron	7,600	233	61%	DJ Basin	May-23	Equity
Surmont	ConocoPhillips	3,325	50	100%	Oil Sands	May-23	Cash
Denbury Resources	ExxonMobil	4,900	47	97%	Louisiana/CO2	Jul-23	Cash
Earthstone	Permian Resources	4,500	78	68%	Permian	Aug-23	Cash
TotalEnergies Canada	Suncor	1,104	61	100%	Oil Sands	Oct-23	Cash
Pioneer Natural Resources	ExxonMobil	67,995	715	78%	Permian	Oct-23	Equity
Hess	Chevron	59,393	394	75%	Diversified	Oct-23	Equity
CrownRock	Occidental	11,977	150	80%	Permian	Dec-23	Cash+Equity
Callon Petroleum	APA Corp	4,454	106	77%	Permian	Jan-24	Equity
Southwestern	Chesapeake	11,597	761	14%	Natural Gas	Jan-24	Equity
Endeavor	Diamondback	26,000	331	70%	Permian	Feb-24	Cash+Equity
Enerplus	Chord	3,802	101	22%	Bakken,Canada	Feb-24	Cash+Equity
Equitrans Midstream	EQT Corp	12,881	n.m.	n.m.	Midstream	Mar-24	Equity
Silverbow	Kimmeridge	2,078	59	38%	Eagle Ford	Mar-24	Cash

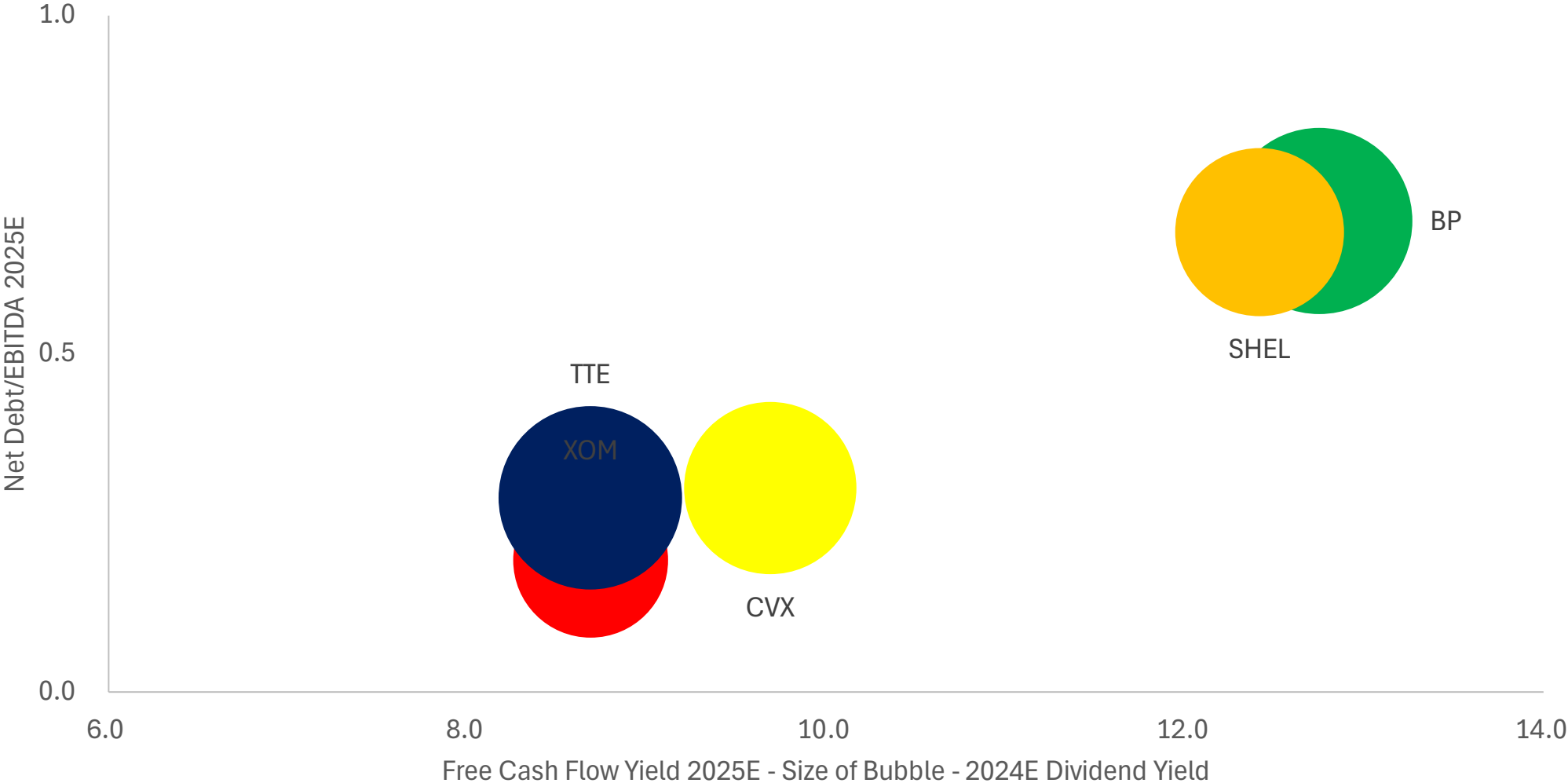
BP acquired BHP Billinton's US shale assets in October 2018 (190kboe/d at the time) and renamed it BPX

BPX is the fastest growing oil driver in BP's portfolio. It's expected to be 25% of group output by 2030

Exxon expects to produce as much oil & gas from the Permian alone as all of BP by 2030

Consensus Yet to Reflect All of Exxon's Benefits

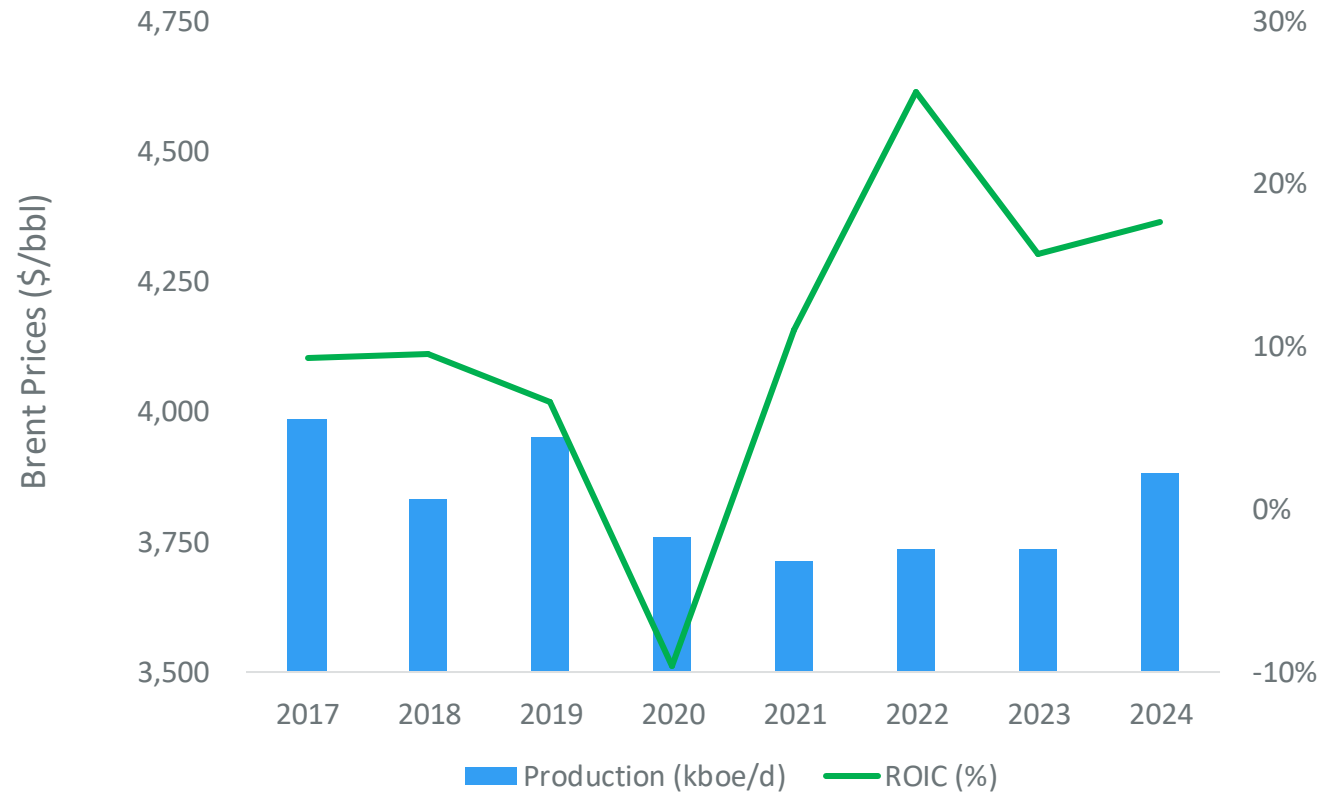
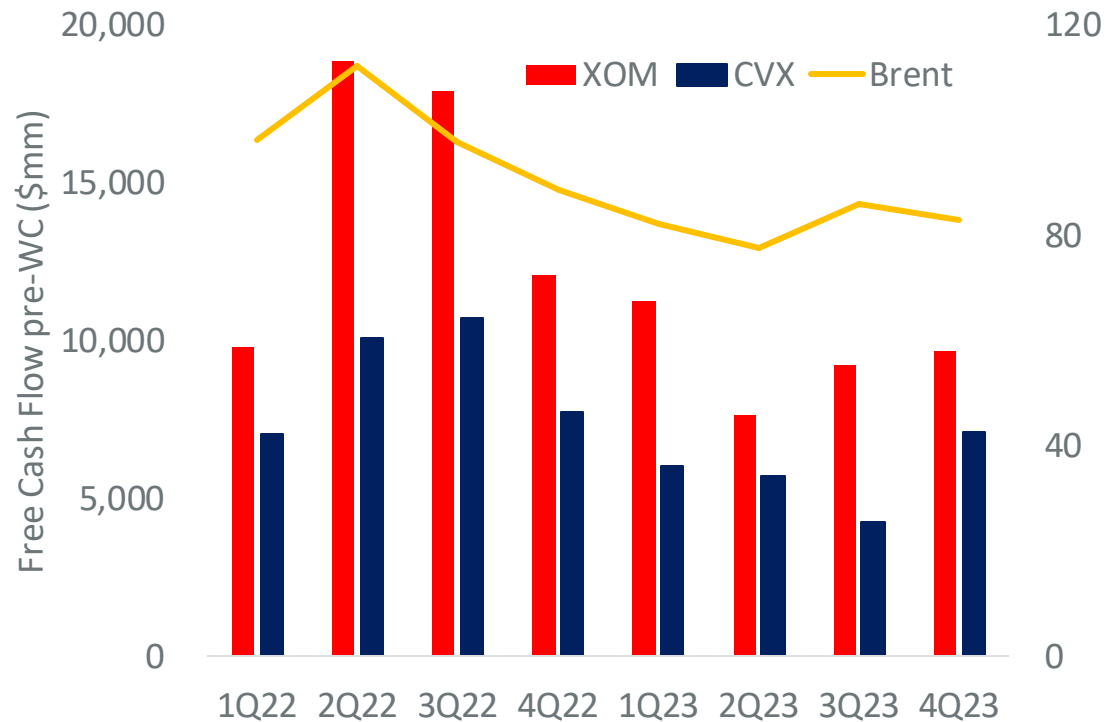
Yet BP Is Receiving the Benefit of a Significant Improvement in Leverage, FCF



The Lazy Trade Is Over – ExxonMobil Is Coming Back



Exxon's Turnaround Is Kicking Into High Gear

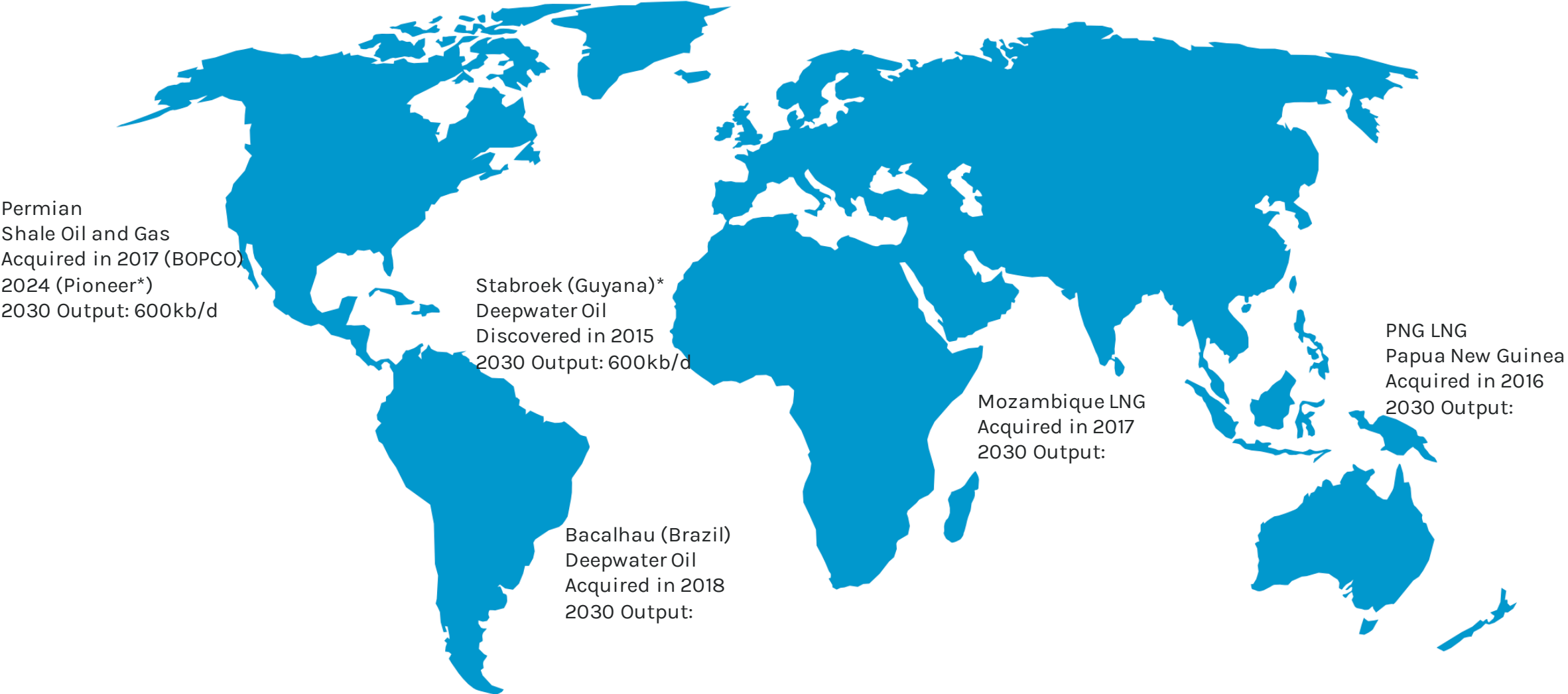


Exxon's free cash flow has been outpacing Chevron when oil and gas prices fall, primarily due to its strong core business (more to follow).

Return on invested capital (ROIC) is inflecting and will turn higher as Guyana/Permian gain

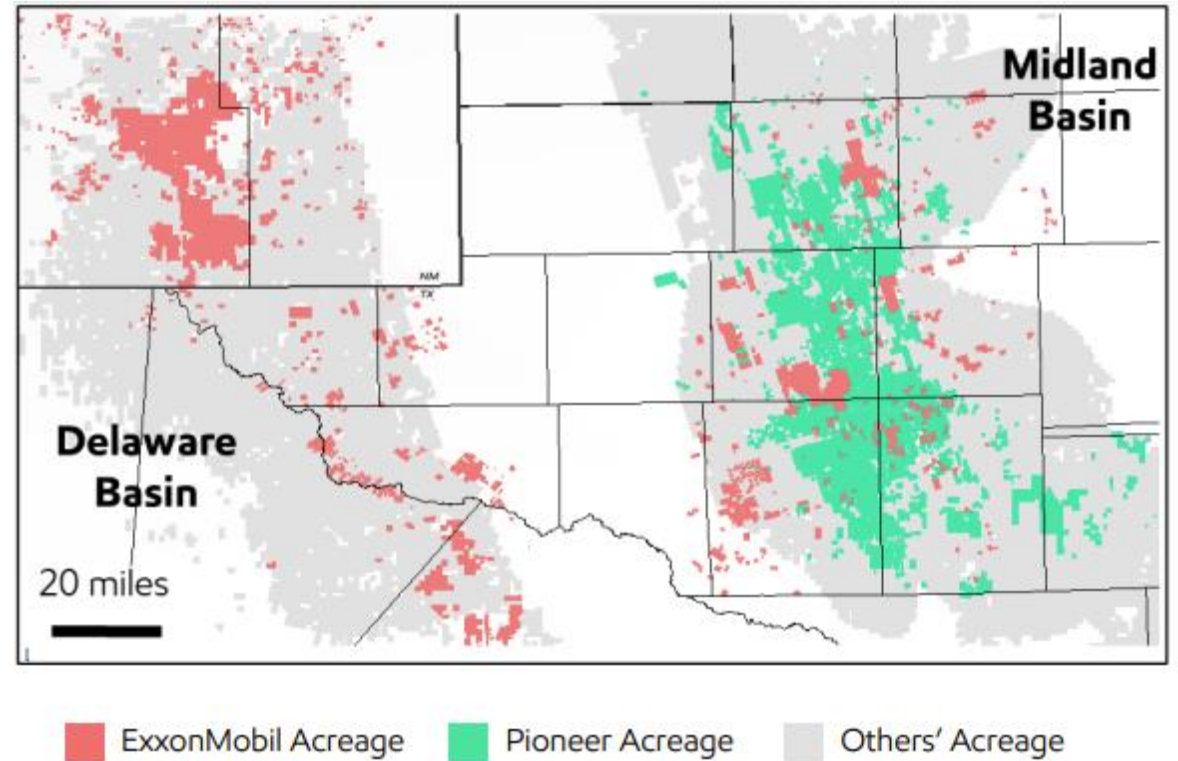
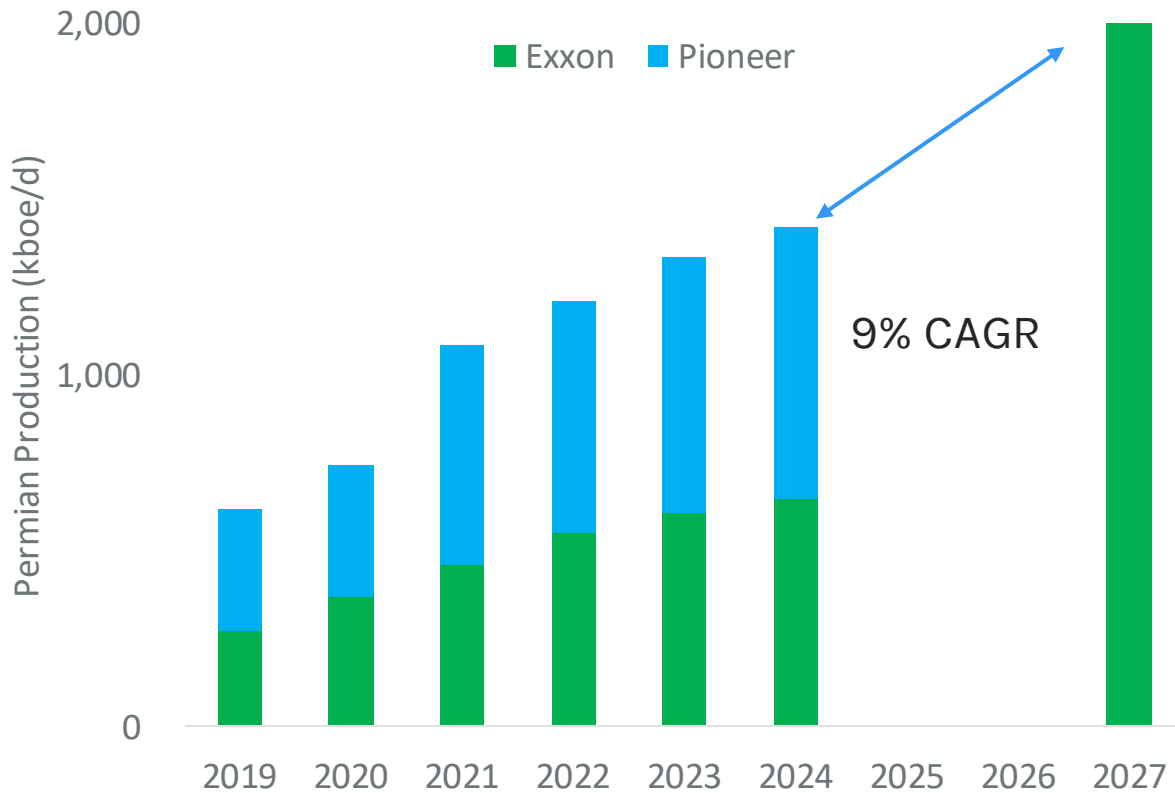
But It's Also Showing That You Can Turn It Around

It's "Pillars of Growth" were all acquired after the 2015 oil price crash



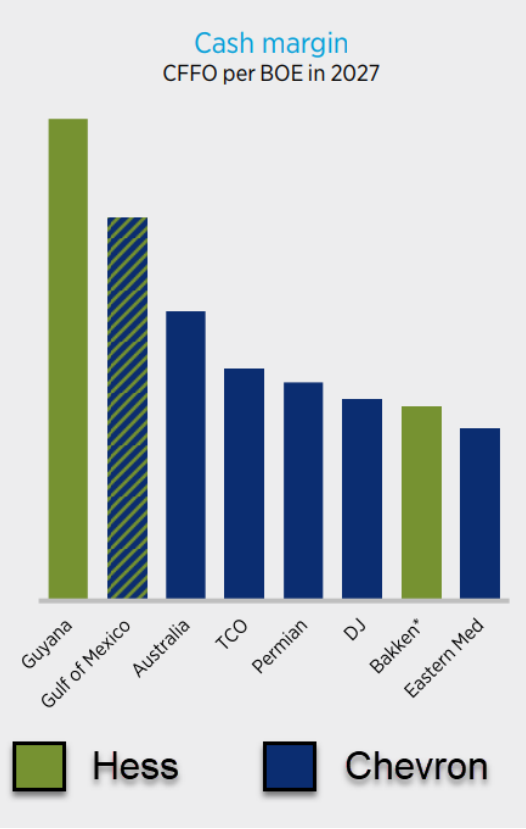
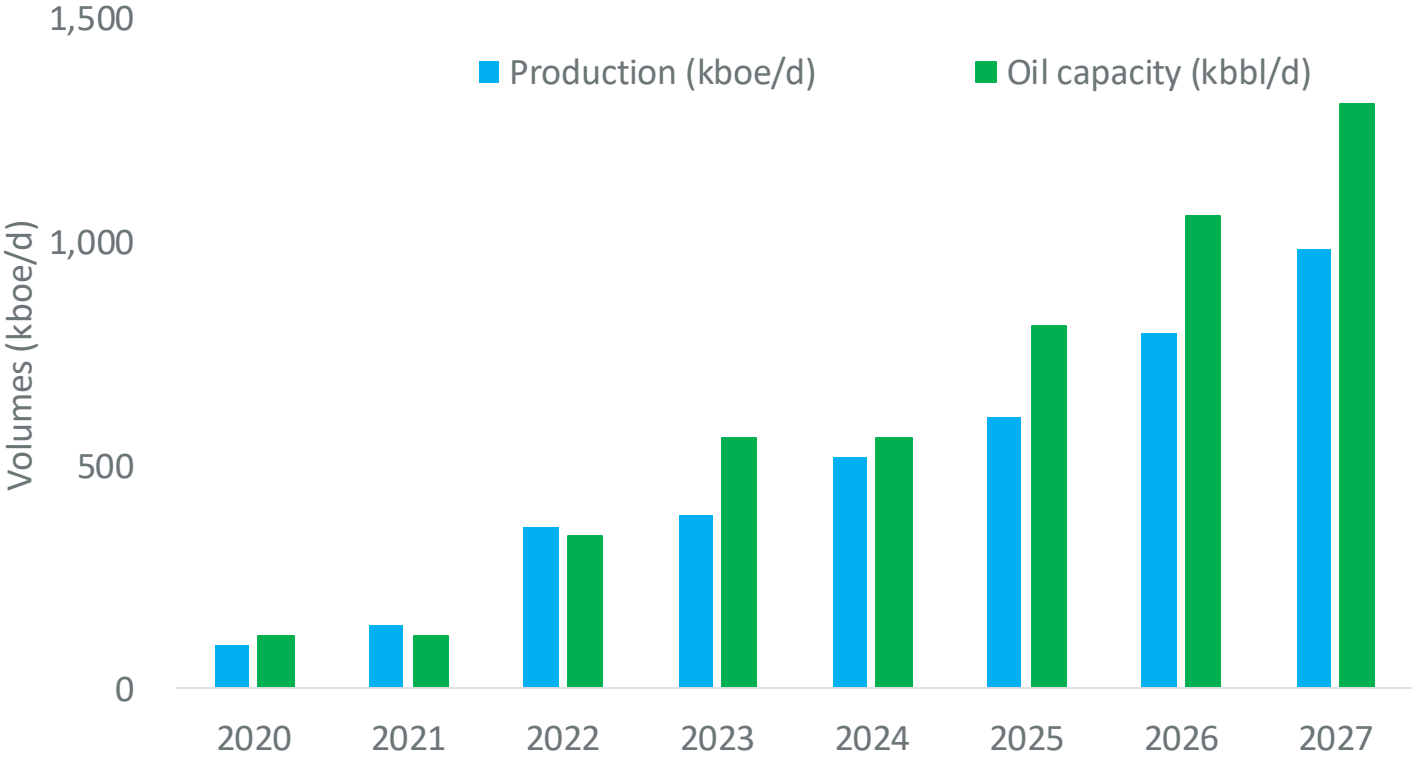
Data Source: Company reports, Hedgeye Estimates. * Exxon's Pioneer acquisition is expected to close in 2024. Guyana excludes Hess' preemptive rights.

Pioneer Will Make It a Top-Three Permian Player



Pioneer fills a major gap in Exxon's Permian holdings, previously concentrated in New Mexico's Delaware basin
Exxon plans to implement a "cube development" strategy. Jury still out on Exxon's version of the cube, but it's a risk

Guyana the Next Best Play Globally – Potentially Best



Chevron estimates Hess Guyana’s cash margin is over 2x its next-best asset, Bakken. Hedgeye estimates a cash margin of \$63/boe in 2027, at \$80/bbl Brent (excludes initial investments).

Qatargas Is Majors' Best Asset and Can Do Better

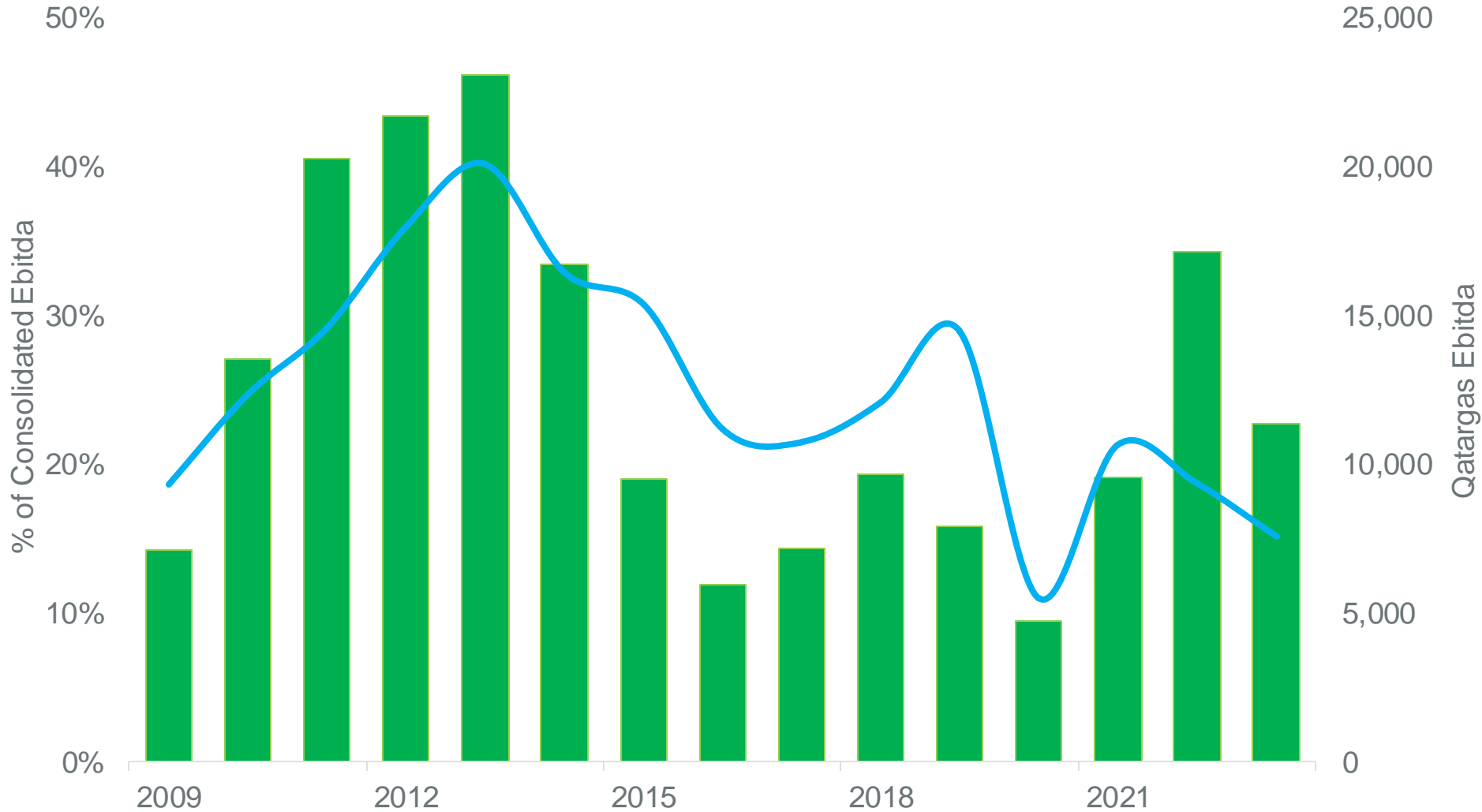
Exxon's Qatargas is likely the most profitable project in any oil majors (excluding Saudi Aramco)

Exxon developed all of Qatargas' LNG trains, but is a main shareholder in the original

We estimate the project contributed as much as 40% of Exxon's CONSOLIDATED Ebitda at times

Europe's need to natural gas will continue to drive earnings for the unit higher

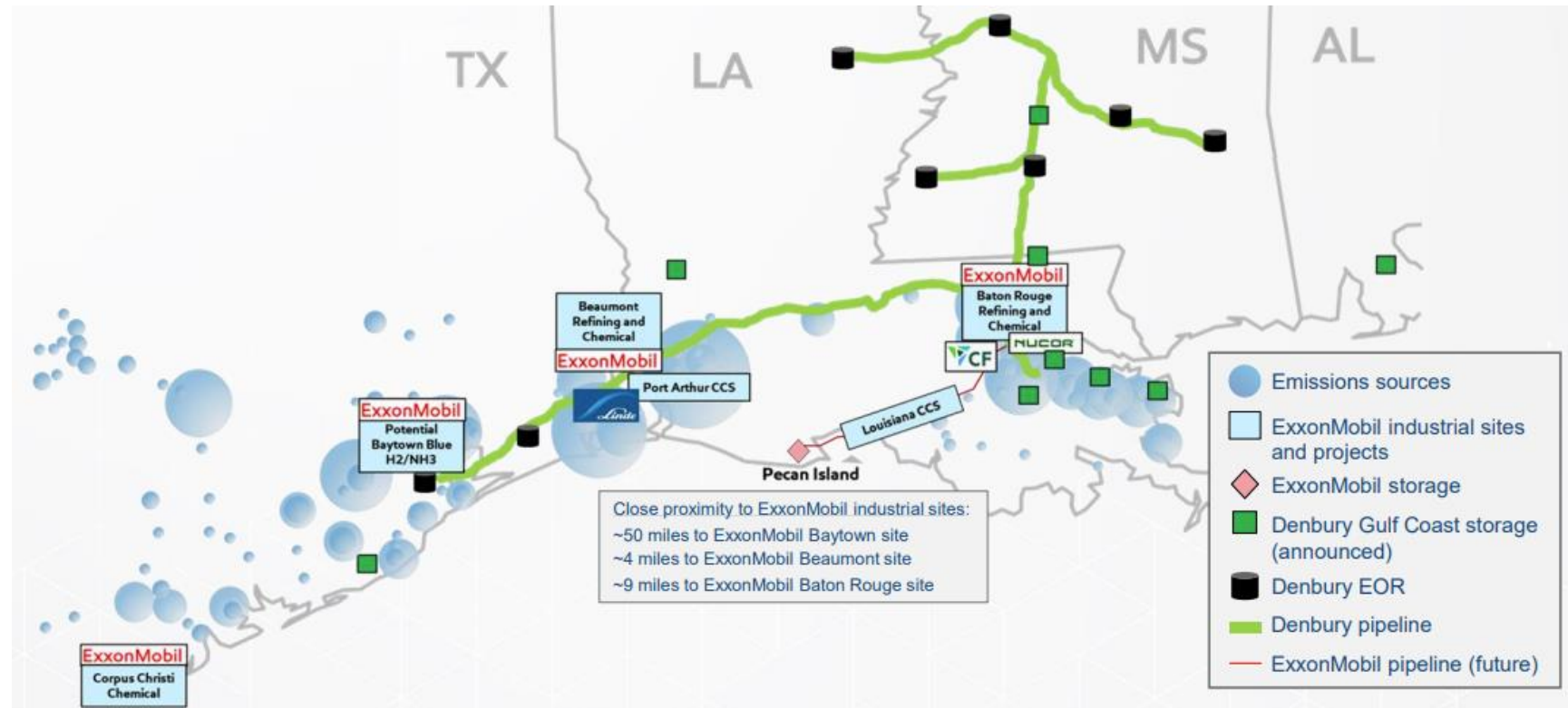
Low maintenance capital gives Exxon substantial free cash flow from Qatar



Slowest Mover Into New Energies – Smaller Mistakes

Exxon prioritizing Carbon, Capture, Sequestration (CCS) over biofuels, renewable power

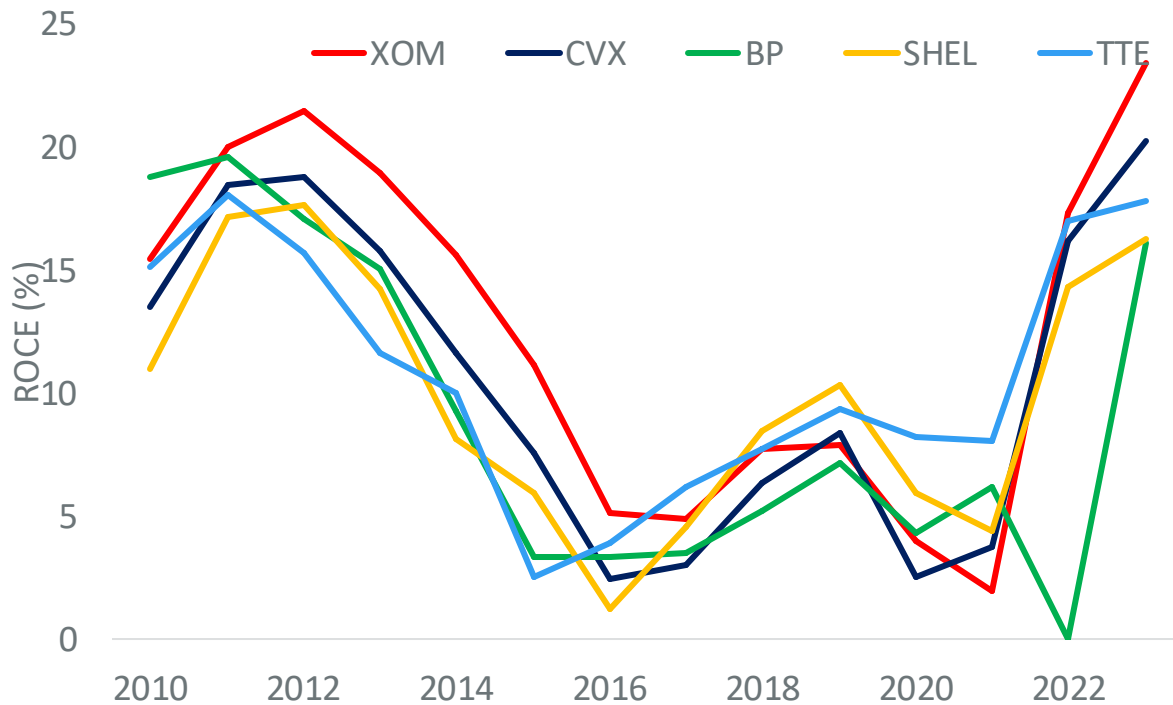
- Exxon spent \$4.9 billion on Denbury deal that accelerates its CCS plans
- Denbury's CO2 pipeline (image) runs next to Exxon's two carbon capture hubs in the Gulf Coast
- This allows Exxon to capture incentives from the Inflation Reduction Act
- Chevron spent \$3.15 billion on Renewable Energy Group and has made several other acquisitions
- It will close two of REGI's biodiesel plants as the fuel is challenged by feedstock availability and lower renewable fuel credit prices
- BP wrote down offshore winds by \$1.1 billion and could fall further if Beacon Wind is written down
- Shell exited power retail and is now looking to sell renewable generation and storage assets in Europe



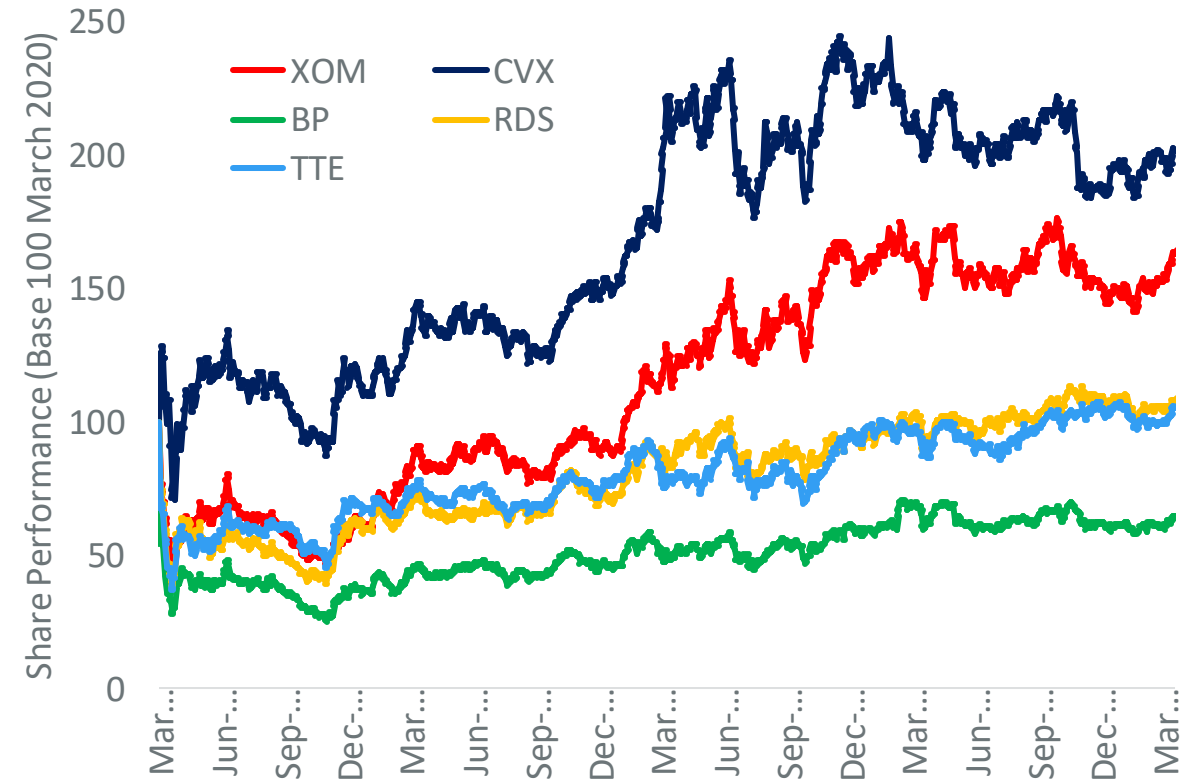
BP Is Back to Petroleum, But Not Fast Enough



BP's Abrupt Shift to Renewables Backfiring



BP 2020 ROCE -79% includes Rosneft write-off

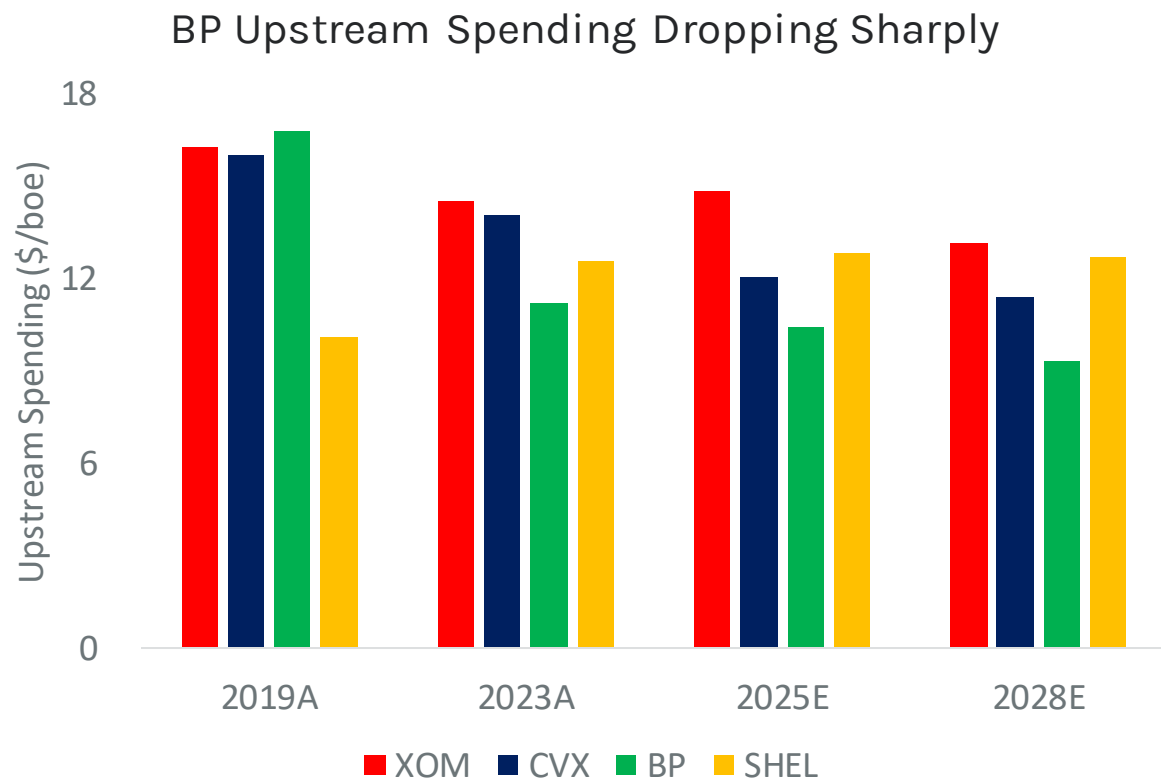


BP's shift to renewables accelerated after Bern Looney took over for retiring CEO Bob Dudley in March 2020

BP has the slowest and shallowest recovery of the group from the 2020 pandemic largely

\$53-\$58 billion 2030 Ebitda target is likely not achievable, barring higher oil & gas prices

...But Pressure to Curb Emissions Limit Deals



Two of the three largest independent Permian E&Ps are off the board. BP's equity may not compare to ConocoPhillips or EOG in an Equity Deal

Permian Producers	2022 Production (kboe/d)	Permian Acreage	Primary Basin	Acquirer	Price (\$ mm)
Mewbourne Oil	400	300,000	Midland/Delaware		
Endeavor Energy	353	350,000	Midland	Diamondback	26,000
CrownQuest	170	94,000	Midland	Occidental	12,000
Tap Rock Resources	112	25,000	Delaware		
Birch Resources	101	n.a.	Midland		
Surge Energy US	64,800	106,600	Midland		
BTA Oil Producers	72	n.a.	Delaware		
Blackbeard Operating	66	100,000	Delaware		

BP plans to spend significantly less per barrel than peers and allow Upstream production to decline by 10%

Plans to keep production costs below \$6/boe are unlikely to succeed with over 30% of output coming from US shale

Shift to higher natural gas will likely drop return on capital

Renewables Push Will Hamper BP and Shell for Years

\$ mm	BP Plan*								
	Capex			Ebitda			Implied ROCE		
	2023A	2025E	2030E	2023A	2025E	2030E	2023A	2025E	2030E
Resilient Hydrocarbons	11.1	10.0	9.0	39.2	41.0	42.5	15%	16%	17%
Oil Production	6.3	5.2	4.5	18.9	27.0	28.5	17%	24%	26%
Natural Gas	3.0	3.0	3.0	14.8	14.0	14.0	14%	13%	15%
Products	1.8	1.8	1.5	5.6	4.5	4.3	12%	10%	10%
Convenience and Mobility	3.1	2.5	3.5	4.4	7.0	10.0	17%	25%	25%
Low-Carbon	1.3	4.0	4.0			2.5	0%	0%	9%
Group	15.5	16.5	16.5	43.6	52.5	59.3	15%	17%	19%

* at midpoint of guidance, implied ROCE, Resilient Hydrocarbons breakdown are Hedgeye estimates

Hurdle Rates	Payback (years)	Min IRR
Hydrocarbons	10-15	>15%-20%
Bioenergy		>15%
Mobility		>15%
Hydrogen		>10%
Renewables		6%-8%

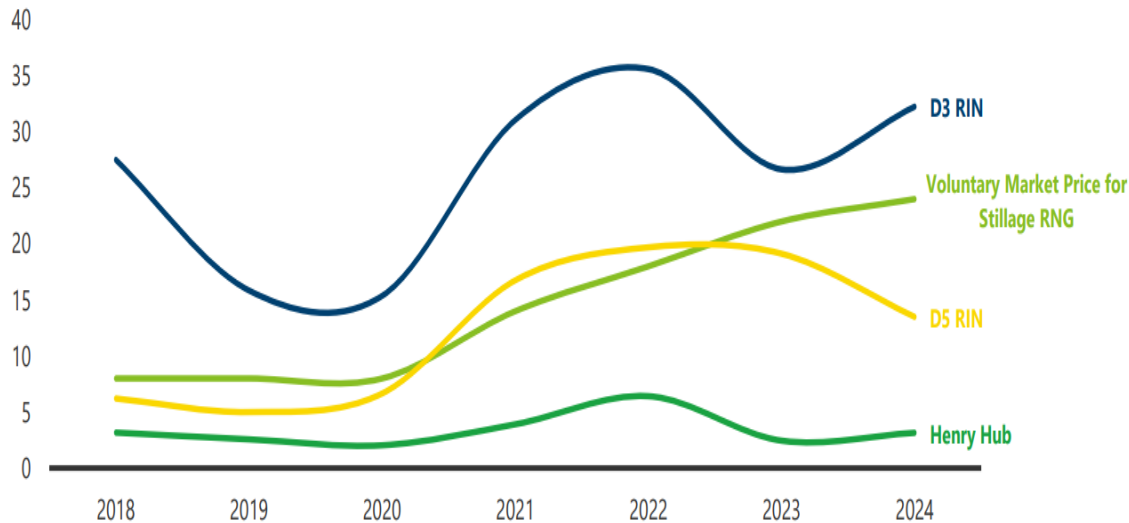
\$ Billions	Capex	
	2025e	2030e
Hydrocarbons	9-11	8-10
Mobility	2-3	3-4
Low-carbon	3-5	3-5
Total	14-18	14-18
<i>Transition</i>	6-8	7-9

\$ Billions	Ebitda	
	2025e	2030e
Hydrocarbons	40-42	41-44
Mobility	7	9-11
Low-carbon		2-3
Total	46-49	53-58
<i>Transition</i>	3-4	10-12

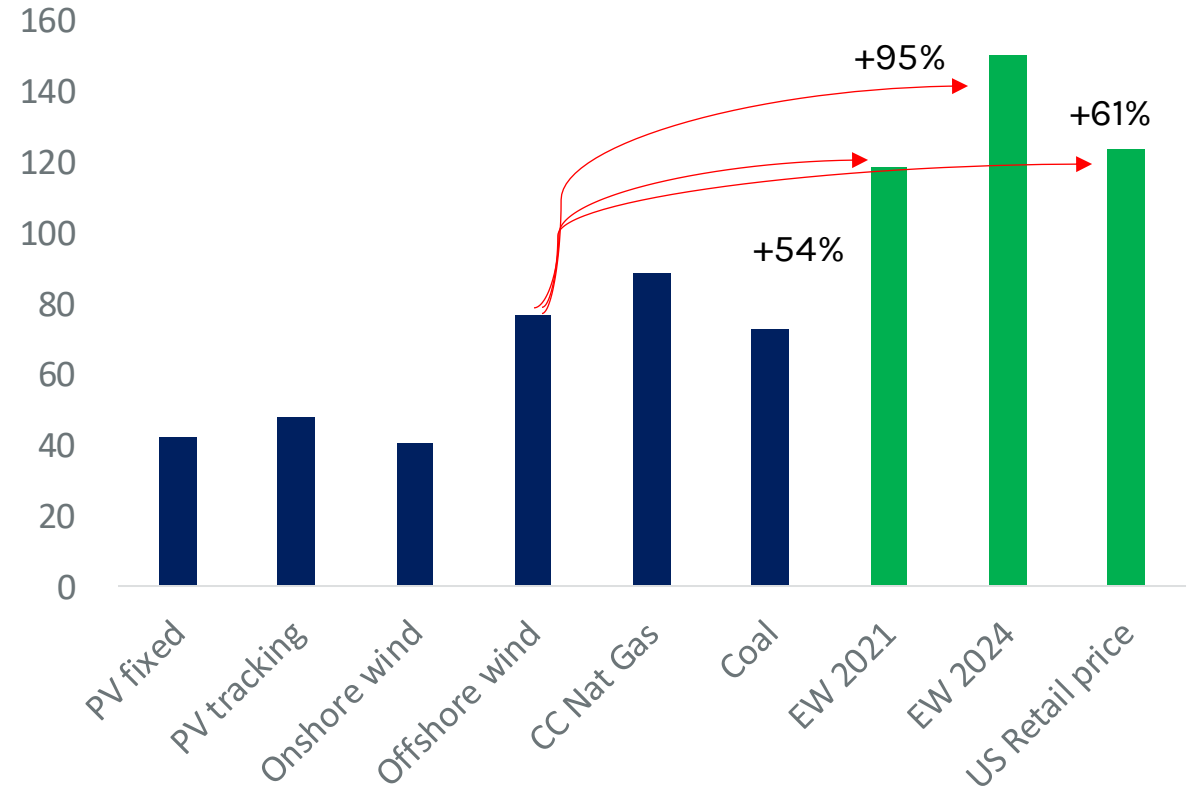
And Rely on Continued Government Support

RNG Demand Projected to Grow until 2030 in GWh

Voluntary Price (USD/MMBtu) Against Henry Hub and RINs is Growing



Source: Verbio Analysis // Conversion: 1 US\$/MMBTU = 3,4 US\$/MWh



Empire Wind’s re-rating shows that despite claims that the “levelized cost of energy” (LCOE) for renewables is lower than natural gas and coal power generation, there’s a lot of wood to chop to make renewables competitive.

BP’s \$2 billion biogas Ebitda by 2030 is untenable. Planned output by BP alone will be 1.6x US credit market (with yearly increases). Pricing of 30x Henry Hub is unsustainable and will lose political support. \$4 billion total biofuel target also elevated.

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