



ENERGY INVESTMENT BANKING

# 2020 Year-End Energy Review

December 2020

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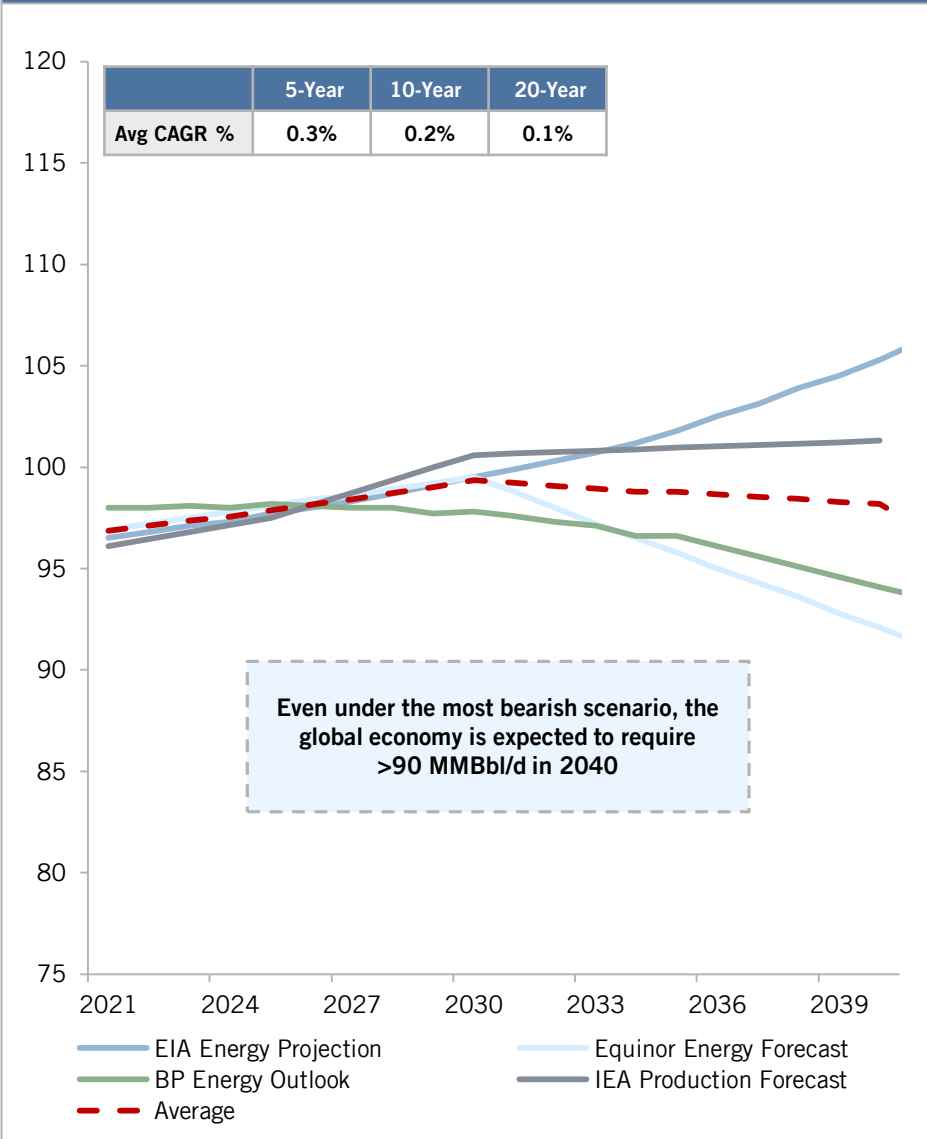
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## **Oil and Gas Macro Outlook**

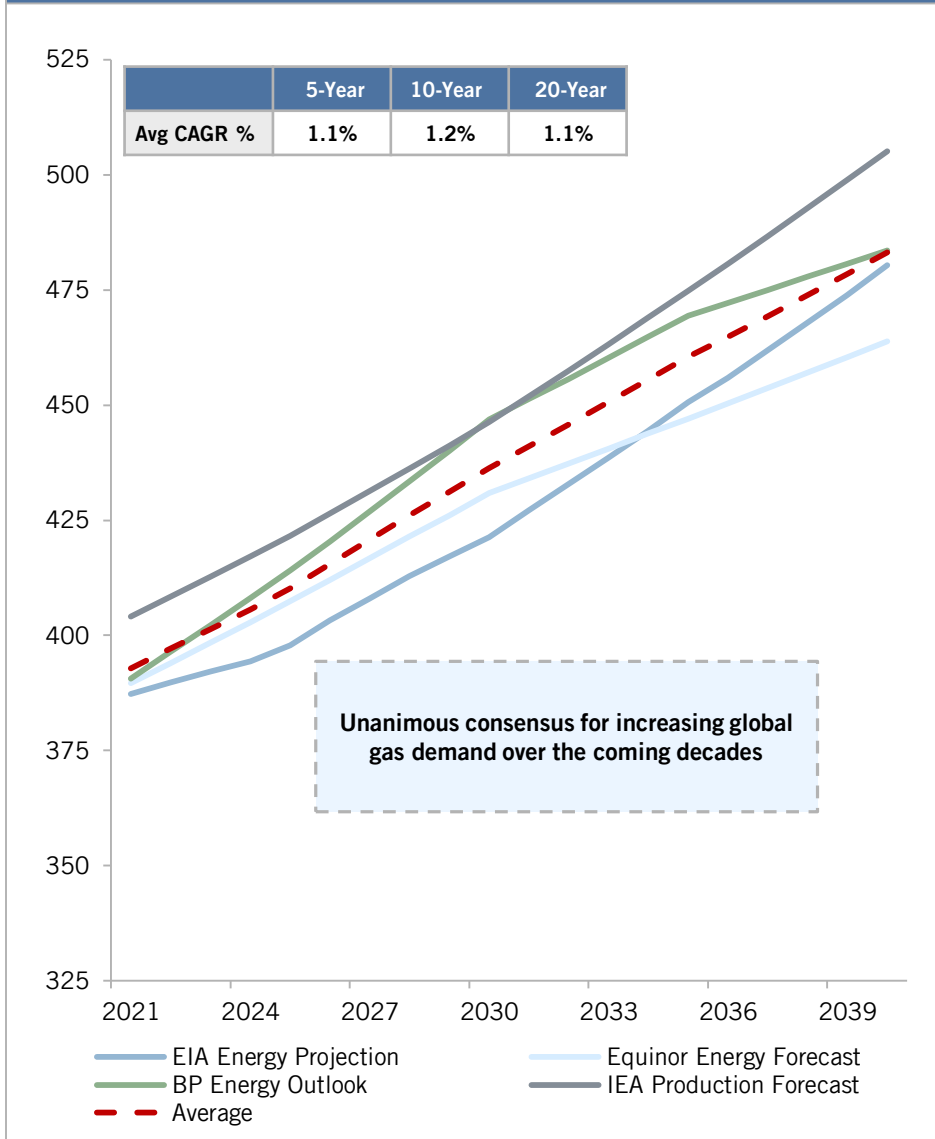
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# Long-Term Forecasts Indicate Oil and Gas Will Continue to Play a Foundational Role for Decades

## Long-Term Global Oil Production Forecast (MMBbl/d)



## Long-Term Global Gas Production Forecast (Bcf/d)



Sources: EIA, BP Energy Outlook, IEA, and Equinor Forecast.

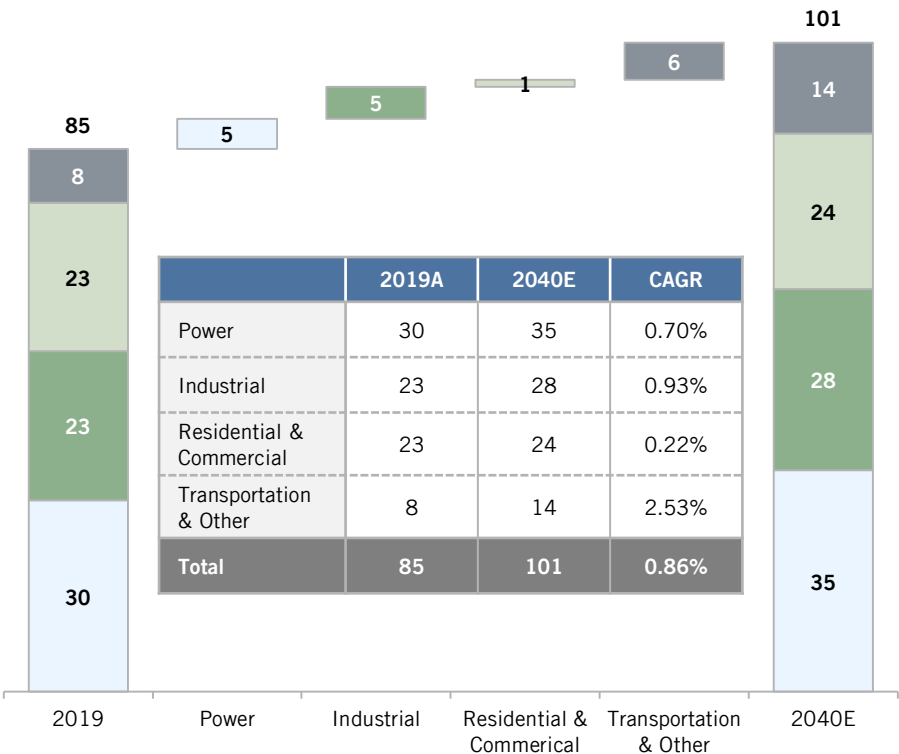
# Market Dynamics Support Long-Term Growth in Lower 48 Gas Production

## Key Points

- While the transition toward increased use of renewable energy is underway and the cost of large-scale solar and wind technologies continues to decrease, there remains a multi-decade secular growth story for natural gas within the United States
- Adding to the long-term need for continued Lower 48 natural gas production growth is rapidly increasing demand from LNG exports and pipeline exports to Mexico, of which almost all will flow from Texas and specifically, the Permian Basin

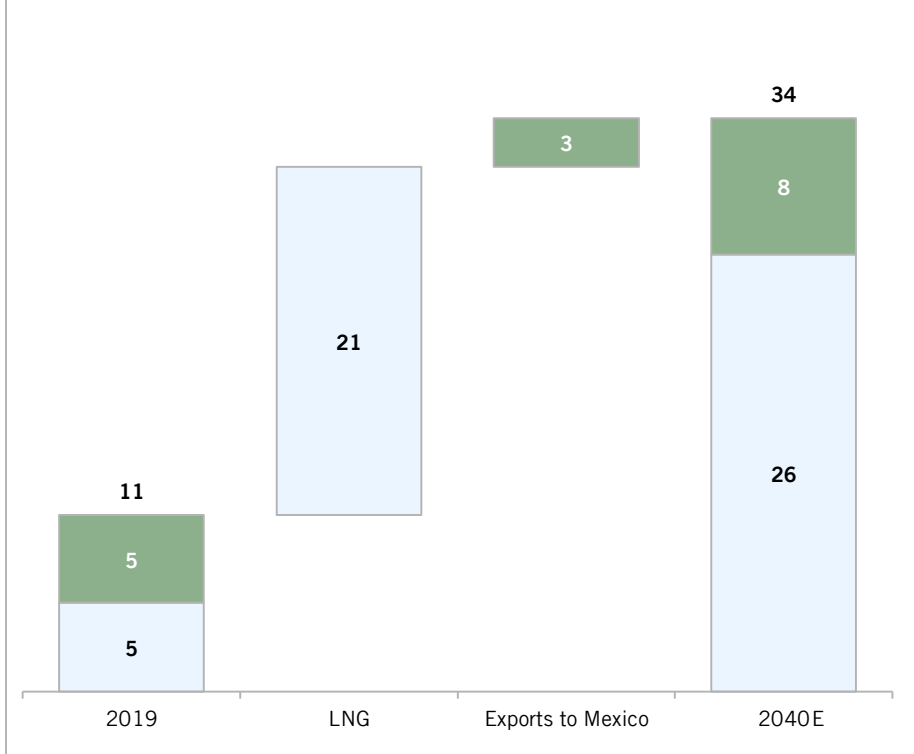
### Domestic Gas Consumption (Bcf/d)

Power Industrial Residential & Commercial Transportation & Other



### U.S. Gas Net Exports (Bcf/d)

LNG Exports to Mexico



Source: EIA & Wall Street Research.

# International Trends in 2021

Theme	Jefferies' Commentary	
<p><b>Commodity Macro</b></p>	<p><i>Known Unknowns?</i></p>	<ul style="list-style-type: none"> <li>■ Sustained oil price recovery to \$55-\$60/bbl, with scope for a price spike                             <ul style="list-style-type: none"> <li>– Medium term oil price is caught between \$1 trillion dollars of underinvestment in supply and 2021 non-OECD demand recovery, catalyzed by a vaccine, and already evident in China</li> </ul> </li> <li>■ Gas market will tighten in 2021-2024, although not as much as oil, as LNG projects are delayed from COVID and LNG demand resumes 4-5% annual growth.                             <ul style="list-style-type: none"> <li>– After 2024, c.105 mmtpa of new volumes from Qatar, Mozambique and US cap the market</li> </ul> </li> </ul>
<p><b>Diverging Corporate Strategies</b></p>	<p><i>Investors have a choice in the next cycle</i></p>	<ul style="list-style-type: none"> <li>■ European Majors focus on M&amp;A with utilities and securing renewable project exposure                             <ul style="list-style-type: none"> <li>– Material disconnect in relative valuations, scarcity of opportunities and legacy coal, nuclear or city heating portfolios in many utilities</li> </ul> </li> <li>■ US big oil gets bigger                             <ul style="list-style-type: none"> <li>– Balance sheet used to drive portfolio high grading; cost synergies and enhanced ability to return capital</li> </ul> </li> <li>■ Formation of a class of super independents with scale, differentiated attributes (regional and/or technical), ROACE focus and ESG narrative (e.g. CCUS)                             <ul style="list-style-type: none"> <li>– E&amp;P consolidation continues in the US and picks up internationally</li> </ul> </li> <li>■ Palpable sense of mini-majors and smaller independents being left behind in the recovery</li> </ul>
<p><b>Decarbonisation Momentum</b></p>	<p><i>Ironically, the Green Transition Needs a Higher Oil Price</i></p>	<ul style="list-style-type: none"> <li>■ Irreversible commitments have been made by the Majors, even with improving commodity macro                             <ul style="list-style-type: none"> <li>– Improvement in share price will be an enabler of acquisitions or mergers with utilities (and avoid Class One transaction complexity)</li> </ul> </li> <li>■ A higher oil price will be an enabler for divestments to fund the transition</li> <li>■ Inconceivable for European Majors to make large upstream acquisitions</li> </ul>
<p><b>Divestments</b></p>	<p><i>It Takes Two</i></p>	<ul style="list-style-type: none"> <li>■ Global deal pipeline is \$160bn</li> <li>■ Despite making a big push in early 2020 to capitalize on COVID disruption, the Asian NOCs have not been successful in major M&amp;A; nonetheless, they tend to perform better as pro-cyclical buyers and activity levels are still high. Many also have a home country advantage</li> <li>■ Poor returns and focus on ESG have made new energy private equity capital formation difficult                             <ul style="list-style-type: none"> <li>– A trend already established in 2019 when, on average, funds closed at 40% of initial target level; for the limited raises attempted in 2020 could be as low as 25%</li> </ul> </li> <li>■ Reduced RBL availability particularly in Africa and LatAm                             <ul style="list-style-type: none"> <li>– Outside of the North Sea, the bank market for borrowing base facilities is markedly reduced as banks struggle with volatile prices, US E&amp;P bankruptcies (40 to end Q3), ESG headwinds and higher syndication risk</li> </ul> </li> </ul>

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## **Upstream Market Outlook**

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# Current Themes in Upstream M&A and Capital Markets

1

Capital Budgets Are Not Expected to Increase

- With E&P companies generally focused on reinvestment rates less than 80% and developing only their highest returning inventory, capital budgets in 2021 are expected to remain slightly below 2020 levels
- A sustained decrease in capital budgets presents a material tailwind for commodity prices in 2021

2

Companies Have Shifted Focus to FCF Generation

- While S&P 500 valuations are at all-time highs primarily driven by the tech sector and an expectation of a broad economic recovery, E&P valuations have remained reasonable and have the most potential upside in a recovery as a result of the industry's transition to a FCF focused model
- Cash return to shareholders is expected to increase with the industry focused on FCF generation over production growth

3

Capital Is Slowly Returning to the Sector

- Both private capital and the high yield market is slowly returning to the E&P sector with an emphasis on supporting growth for disciplined public and private operators and reducing RBL exposure

4

Commercial Lenders Sharply Reducing Exposure

- Since Q1 2020, Bank of America, Citi, JPMorgan and Wells Fargo have in aggregate reduced their energy loan exposure by ~\$12 Bn
- Over time, RBL replacement capital will become a large portion of E&P company funding
- Jefferies has had active dialogue with the institutional market and believes an RBL replacement financing underpinned by strong asset coverage and structural protection is viable today

**We Expect the Above Themes to Set Up a More Constructive Upstream Industry Backdrop in 2021**



# Low Capital Investment Will Remain in 2021

1 Capital Cuts Remain

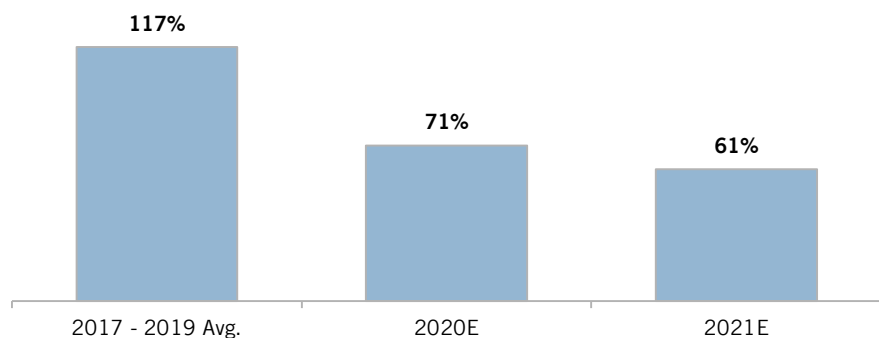
2 FCF Model Emerging

3 Capital Returning

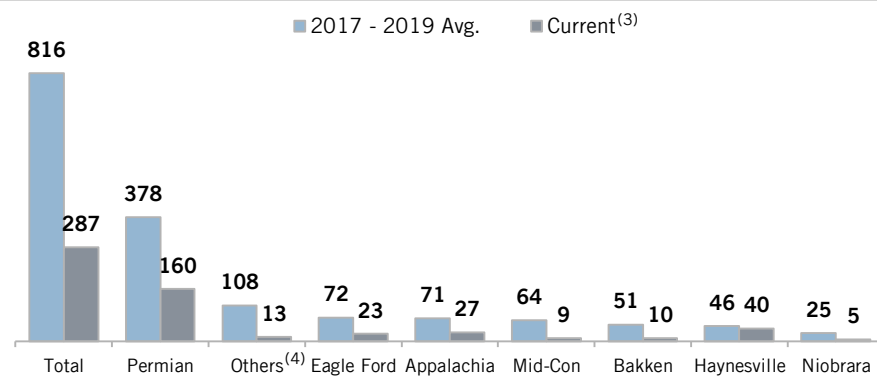
4 Commercial Lenders Retreating

## Capital Cuts to Remain in Order to Facilitate Higher Cash Returns to Investors

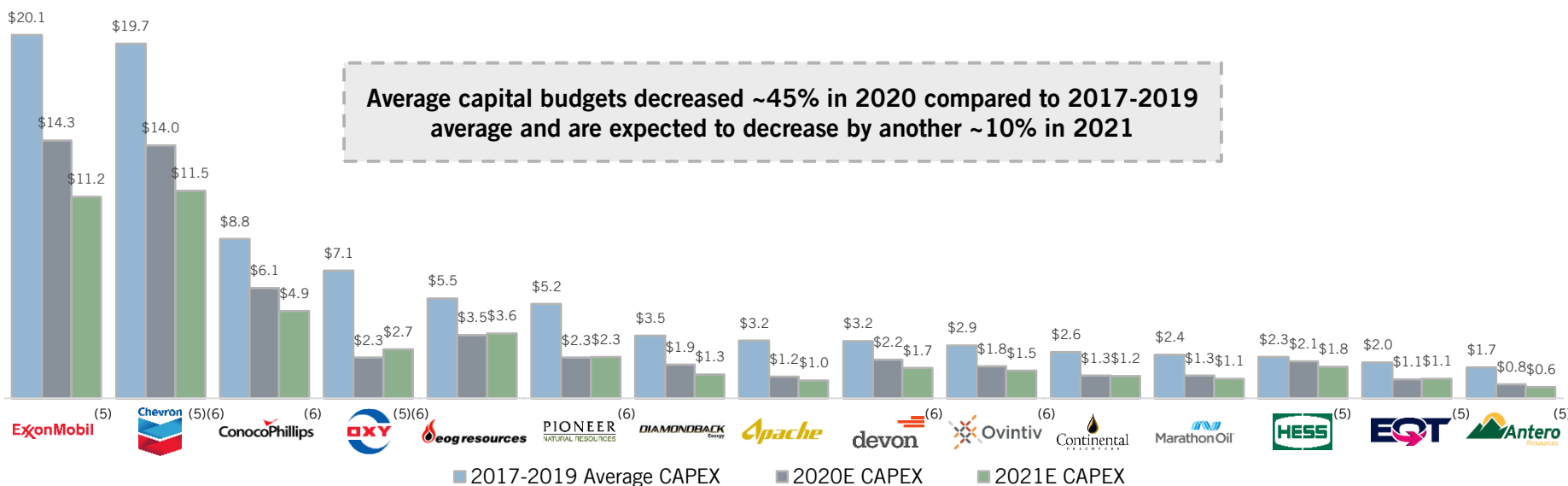
### Upstream E&P Sector Reinvestment Rate <sup>(1)(2)</sup>



### U.S. Lower 48 Horizontal Rig Count Remains Low



## Significant Reduction in Capital in 2020 Is Likely to Remain (\$ Bn)



Source: Baker Hughes, CapIQ estimates.

(1) Includes North America E&P companies >\$0.5 B TEV and publicly traded since 2017.

(2) Estimate as of 12/14/2020. Calculated as EBITDA / CAPEX for respective time period.

(3) Baker Hughes Rig Count as of 12/04/20.

(4) Includes Powder River Basin, Barnett, Fayetteville, California and other non-core regions.

(5) Historicals and estimates reflect upstream capital only.

(6) Pro forma for material mergers including historical years prior to transaction close date.

# Upstream Transitions to Free Cash Flow Model as Tech Boom Drags Broader Valuations Higher

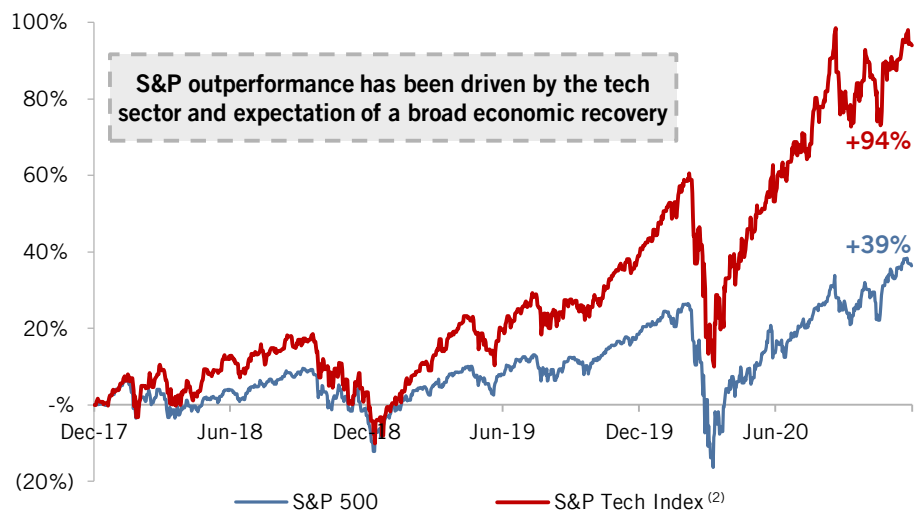
1 Capital Cuts Remain

2 FCF Model Emerging

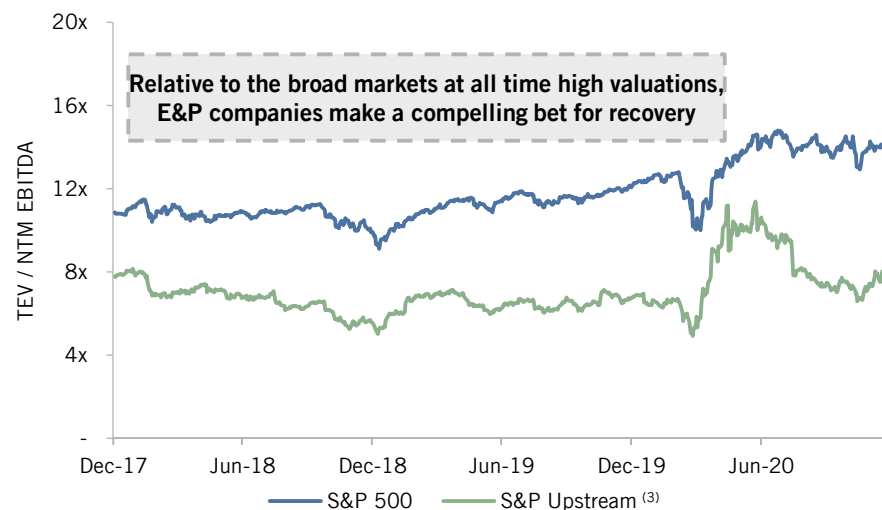
3 Capital Returning

4 Commercial Lenders Retreating

## S&P Performance Last Three Years <sup>(1)</sup>



## S&P Valuation at All Time Highs <sup>(1)</sup>



## E&P Companies Well Positioned for 2021

### Constructive Valuations

TEV / 2021E EBITDA

5.6x

### Free Cash Flow Generation

2021E FCF Yield

9.4%

### Sustainable & Improving Capital Structures

Net Debt / 2021E EBITDA

2.3x

Companies have generated free cash flow and reduced leverage, while still trading at attractive valuations

Source: CapIQ, Company filings.

(1) Market data as of 12/14/2020.

(2) S&P Tech Index defined as components and holdings of XLK index.

(3) S&P Upstream includes integrated and pure-play E&Ps in S&P 500 index; XOM, CVX, COP, EOG, PXD, OXY, HES, CXO, FANG, COG, DVN, APA and MRO. Index is market cap weighted.

# Companies Adopting (& Validating) the Free Cash Flow-Focused Business Model...

1 Capital Cuts Remain

2 FCF Model Emerging

3 Capital Returning

4 Commercial Lenders Retreating



## Background

- Employing cash flow roll-up strategy
- Current management team began in August 2018

- Long-life, low decline production model that mitigates downside, while protecting upside; aggressive financing strategy

- Early adopter of FCF focused, modest reinvestment rate business model

## Financings (Since 2018)

✓ *Support from Shareholders / Capital Markets*

### Transaction Volume

7  
(5 Common Equity / 1 Preferred /  
ATM Program)

7  
(3 ABS Issuances / 3 Follow-On Offerings /  
Acquisition Joint Venture)

3  
(Issued shares to sellers for two acquisitions /  
High Yield offering)

### Proceeds / Commitments

~\$220 MM

~\$2,050 MM

~\$505 MM

## M&A (Since 2018)

✓ *Active in M&A*

### Transaction Volume

7<sup>(1)</sup>

8

5

### Transaction Value

\$342 MM

~\$1,623 MM

~\$402 MM

## Market Statistics

### Market Capitalization<sup>(2)</sup>

\$370 MM

\$1,049 MM

\$1,885 MM

### Enterprise Value<sup>(2)</sup>

\$547 MM

\$1,791 MM

\$2,136 MM

## Select Metrics

✓ *Attractive Valuations*

### 2020 YTD Reinvestment Rate

39.5%

8.0%<sup>(3)</sup>

65.0%

### LQA FCF Yield<sup>(2)</sup>

17.2%

21.3%<sup>(3)</sup>

10.1%

(1) Includes fee for service strategy and initial partnership with MCEP (\$4 MM / year service fee and warrants struck at \$4.00).

(2) Market data as of 12/14/2020.

(3) DGOC metrics based on 1H 2020 metrics.

# Capital Slowly Returning to the E&P Sector

1 Capital Cuts Remain

2 FCF Model Emerging

3 Capital Returning

4 Commercial Lenders Retreating

## Bank Disintermediation

- RBL lenders all in various speeds of reducing/eliminating oil and gas exposure
- RBL extensions are universally more difficult and significant paydowns are being required to get to desired outcomes in many cases
- Over time, RBL replacement capital will become a large portion of company funding

### Case Study

- Callon issued \$300 MM of Senior Second Lien Notes and sold an ORRI to Kimmeridge Energy for \$140 MM<sup>(1)</sup>
- The Company used the proceeds to repay borrowings under its credit facility

September 2020

**CALLON**  
PETROLEUM

Private Placement of  
Second Lien Secured Notes  
and Royalty Interest Sale

**\$300,000,000**  
**\$140,000,000**

Sole Financial Advisor  
Joint Financial Advisor (ORRI)

## Private Growth Capital

- Growth capital is available to disciplined public and private operators with a proven track record
- Significant opportunity exists to aggregate high-quality, production-weighted assets

### Case Study

- Diversified (“DGO”) and Oaktree formed an acquisition joint venture to focus on mature, PDP assets across the Lower 48
- DGO will acquire the assets on a 50% basis and earn an upfront and back-end promote

October 2020



DIVERSIFIED GAS & OIL  
PLC

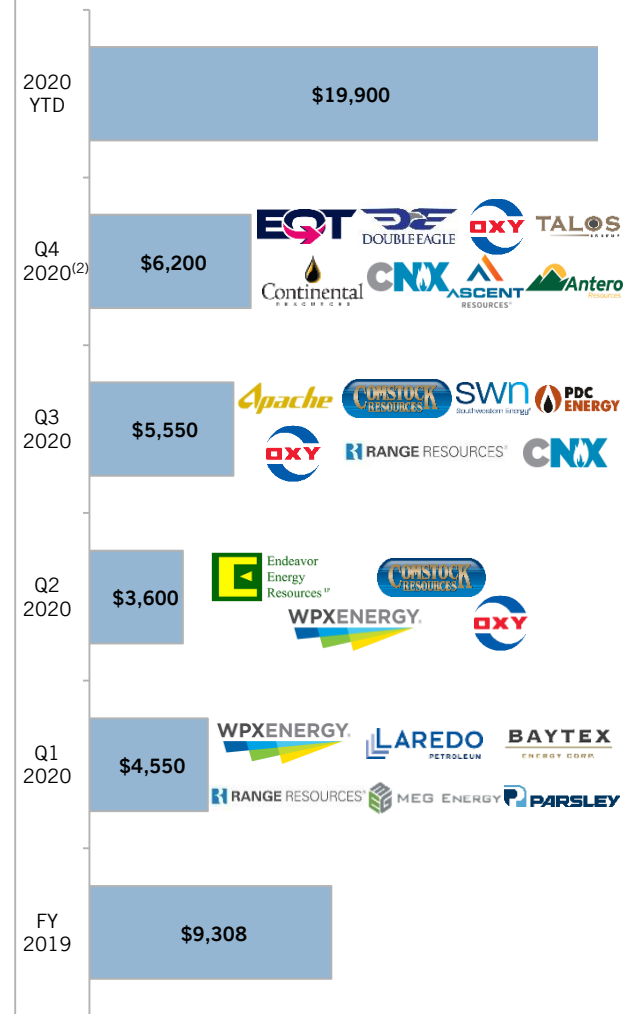
Joint Venture with  
**Oaktree Capital Management L.P.**

**\$1,000,000,000**

Sole Financial Advisor

## High Yield

### New Issue Activity Continues to Build (\$MM)



(1) The Senior Second Lien Notes included at the market warrants exercisable for approximately 15% of the Company's pro forma issued and outstanding common stock.

(2) Inclusive of Talos Energy which is currently in-market.

# Commercial Lenders Have Been Swiftly Reducing Energy Exposure

1 Capital Cuts Remain

2 FCF Model Emerging

3 Capital Returning

4 Commercial Lenders Retreating

## Key Points

- Bank capital availability to upstream companies is meaningfully constrained as a result of the significant losses, the prospect of future capital markets fees being unclear and ESG considerations
- Banks have made a concerted effort to reduce their energy (and specifically E&P) exposure since the last downturn
  - Energy funded loans as a percent of total loans decreased ~38% and ~35% for large cap and mid cap / regional banks, respectively <sup>(1)(2)</sup>
  - E&P funded loans as a percent of total loans decreased ~31% for mid cap / regional banks, while large cap banks seek to reduce visibility of lending practices to the sector <sup>(1)(2)</sup>
- Bank of America, Citi, JPMorgan and Wells Fargo have been the most aggressive in reducing energy exposure in 2020 having ~\$12 Bn of reduction in aggregate from Q1 to Q3 2020

At a recent conference hosted by the Dallas and Kansas City Federal Reserves, Wells Fargo Managing Director for Energy Credit and Risk Management Chris Holmgren said banks had essentially shut off the upstream segment after years of disappointment.

“The core reserve-based lending model began to break down. It became not successful in grasping the risks involved in shale development,” he said. “Lenders began to realize that they made decisions based on exaggerated potential.”

**WELLS FARGO**

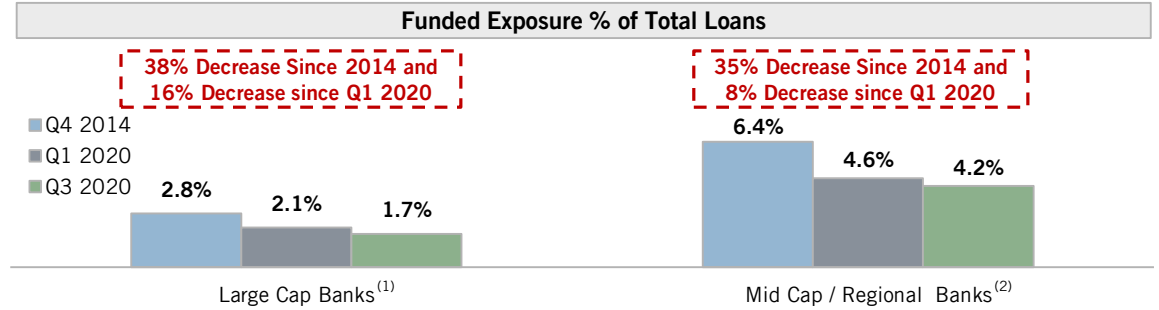
**S&P Global Market Intelligence**  
December 7, 2020

Source: Company filings, presentations and earnings calls.

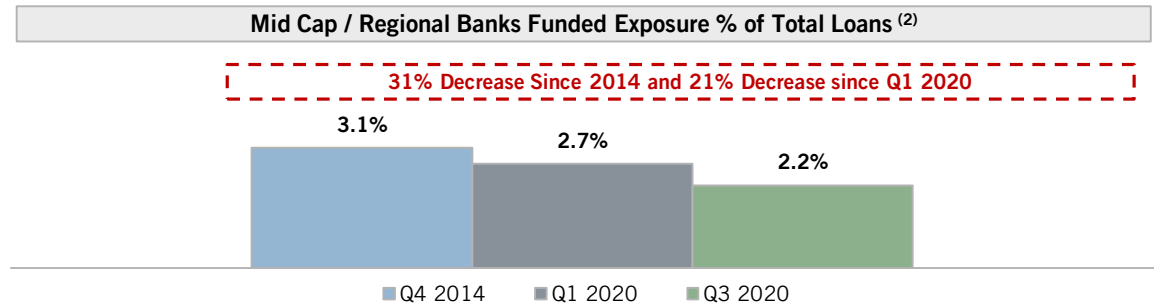
(1) Large Cap Banks include as BAC, C, WFC, JPM, PNC, GS.

(2) Mid Cap and Regional Banks include CMA, RF, ZION, BOK, FITB, CFR, HWC, CIT, TCBI, CADE and PB.

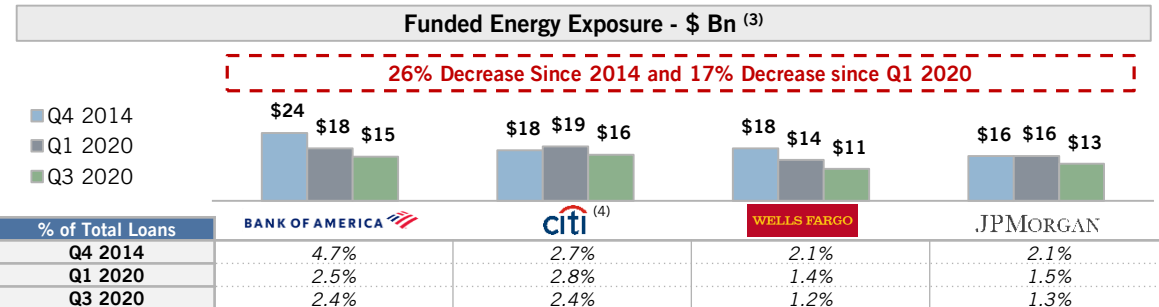
## Bank's Energy Exposure Continues to Sharply Decline



## E&P Exposure Has Been Reduced the Most in 2020



## The Largest Lenders Have Pulled Back the Most in 2020



(3) Energy Exposure defined as “Energy” of Bank of America, “Energy and Commodities” for Citigroup, “Oil, Gas and Pipelines” for Wells Fargo and “Oil & Gas” for JP Morgan.

(4) Does not include energy-related exposures classified in other industries.

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# Midstream Market Outlook

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## Current Themes in the Midstream M&A and Capital Markets

1

### Broad-based Volumetric Declines

Midstream industry grappling with excess capacity in the face of broad-based volumetric declines, including – for the first time in over a decade – the Permian

2

### Utilities Exiting Midstream

Once a reliable buyer of high quality midstream assets, utilities are now focused on trimming midstream exposure and divesting their asset portfolios

3

### Decreased M&A Activity

The total number of midstream M&A transactions was far fewer than in any year in recent memory, and those that did occur tended to be larger in size and tilted toward demand-pull businesses rather than those with wellhead exposure. The market continues to expect significant consolidation but meaningful activity has not yet materialized

4

### Investors Focused on Cash Flow Certainty

Public and private midstream investors have increasingly transitioned away from yield-based valuations and focused on free cash flow generation; companies responded with meaningful cost reductions and lower capital budgets

5

### Growth in LNG

Global LNG regasification capacity under construction hit a 10-year high at 144 mtpa in 2020 and U.S. LNG exports hit at all-time high in early-December 2020 of ~11.5 Bcf/d

**We Expect the Above Themes to Set Up a More Constructive Midstream Industry Backdrop in 2021**

# Declining Production Across All Basins Resulting in Under Utilization of Midstream Assets

1 Volumetric Decline

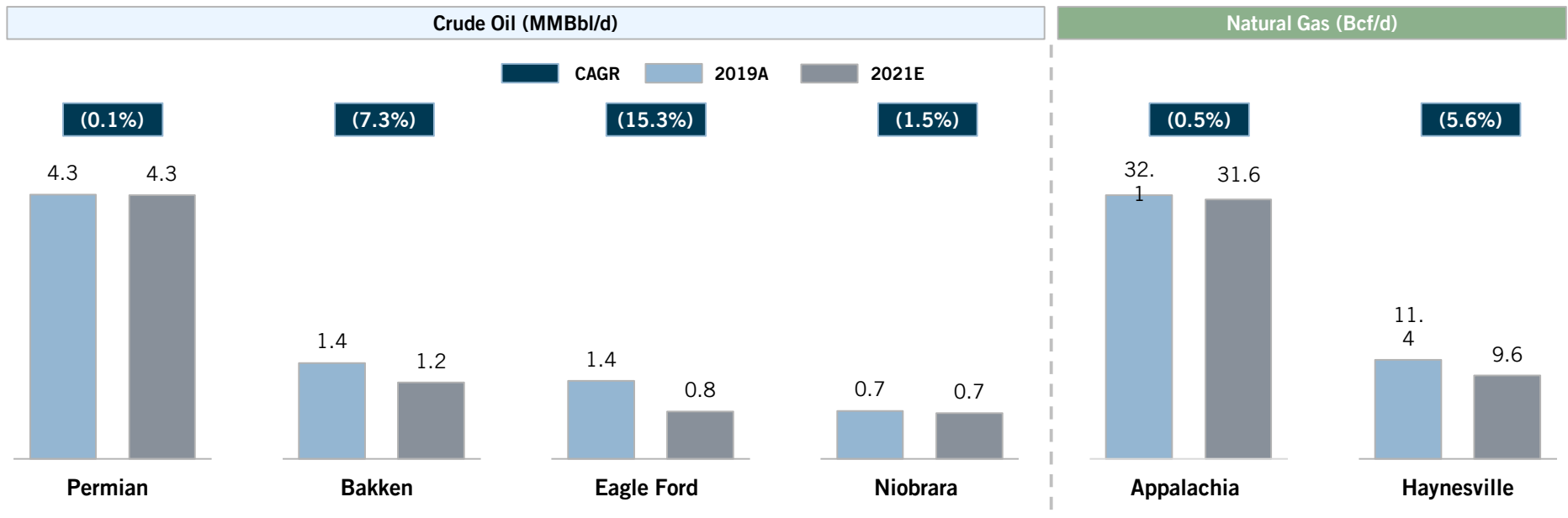
2 Utilities as Sellers

3 Decreased M&A

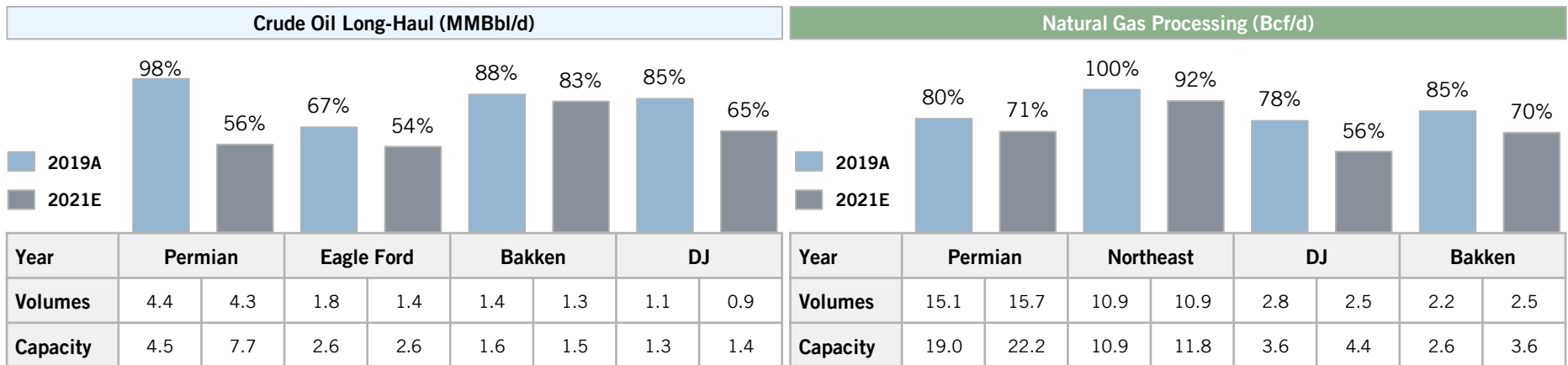
4 Reliable Cash Flows

5 LNG Growth

## U.S. Production Forecast by Basin



## Forecasted Long-Haul Crude Pipeline and Natural Gas Processing Plant Utilization



Source: Wall Street research, investor presentations and SEC filings.



# U.S. Utilities, Once Midstream Buyers, Now Exiting

1 Volumetric Decline

2 Utilities as Sellers

3 Decreased M&A

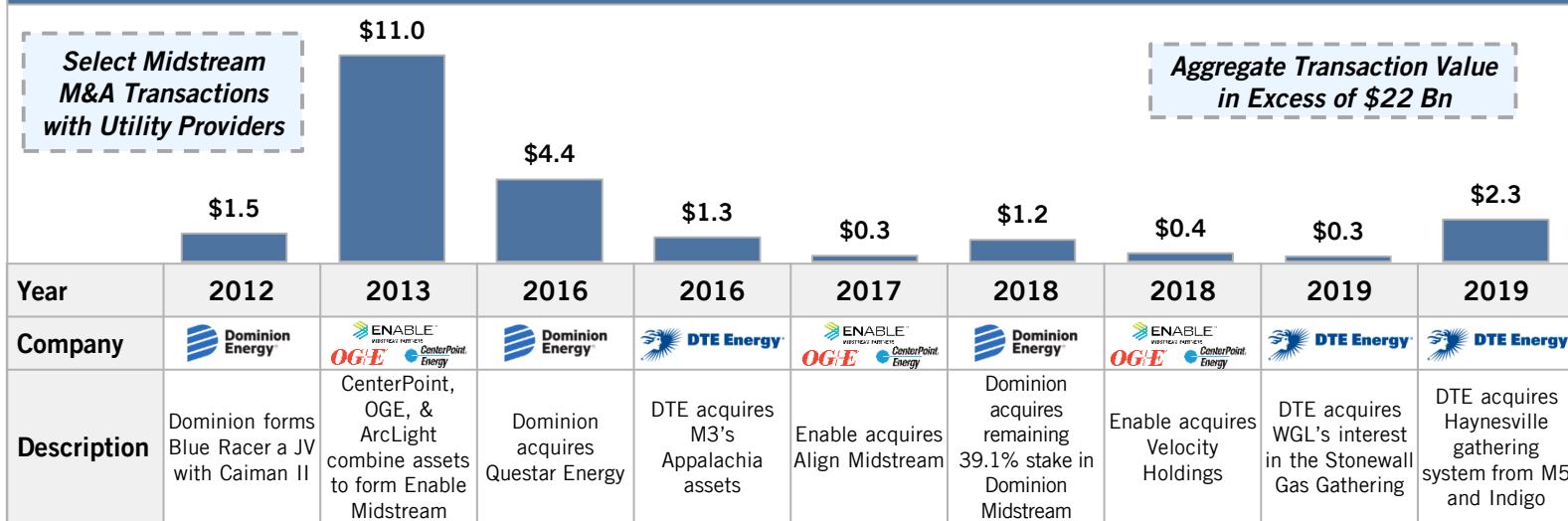
4 Reliable Cash Flows

5 LNG Growth

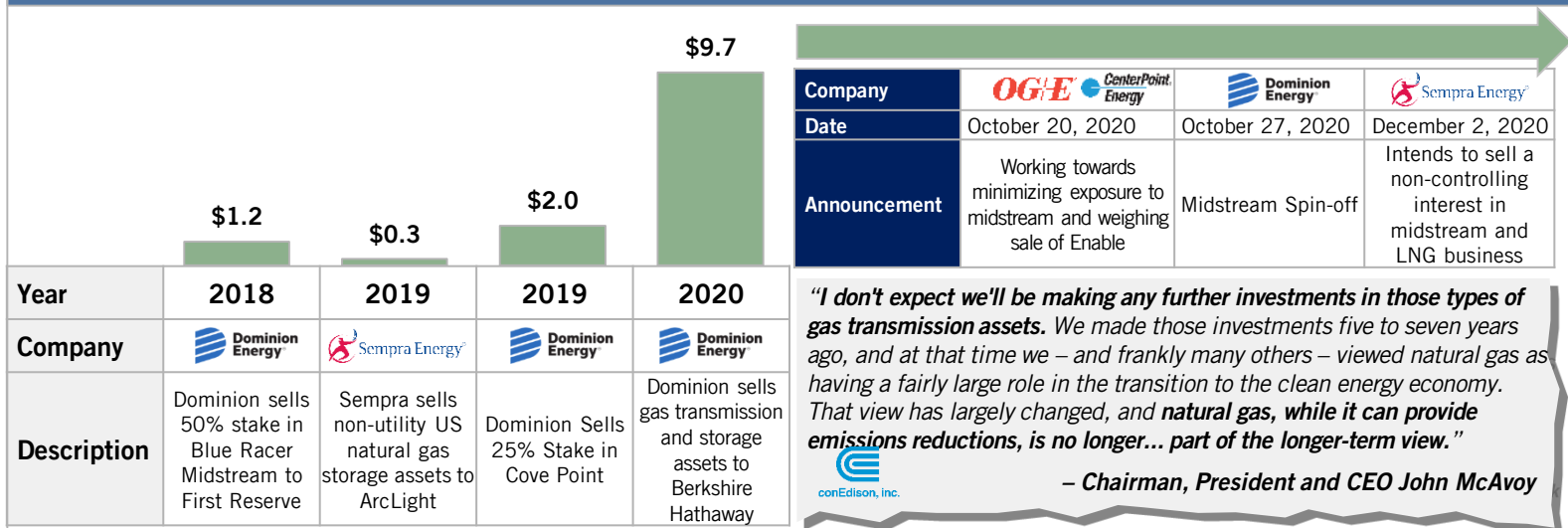
## Key Points

- Given their inherent short of natural gas, utilities sought to acquire natural gas midstream assets to vertically integrate their business
- Between 2012 and 2019, Dominion, DTE Energy and OGE and CenterPoint acquired billions of dollars worth of midstream assets
  - More recently, their midstream segments have come to be viewed as being at odds with ESG mandates in addition to weighing on earnings and creating unnecessary volatility

## Utilities Were Historically An Active Acquiror in the Midstream M&A Market...



## ...Recently Utilities Have Been Decreasing Midstream Exposure and, in Certain Cases, Affecting Full Midstream Exits



# 2020 Midstream M&A Was Dominated by a Few Large Transactions with Financial Buyers

1 Volumetric Decline

2 Utilities as Sellers

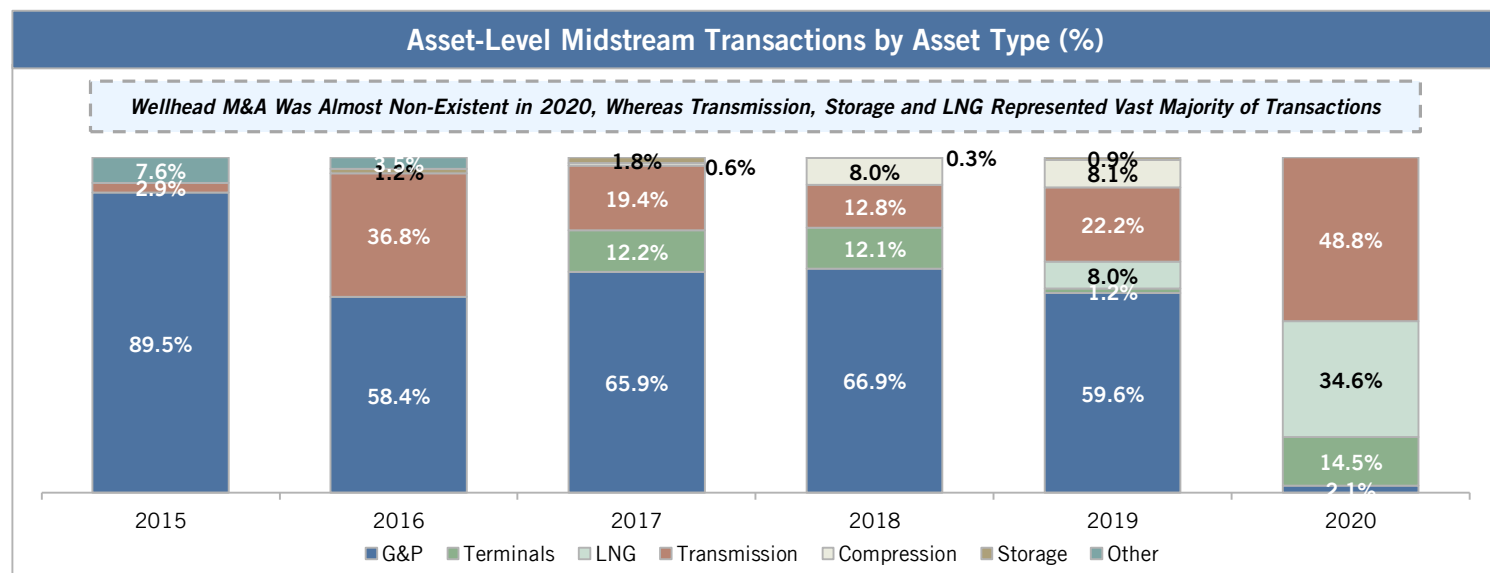
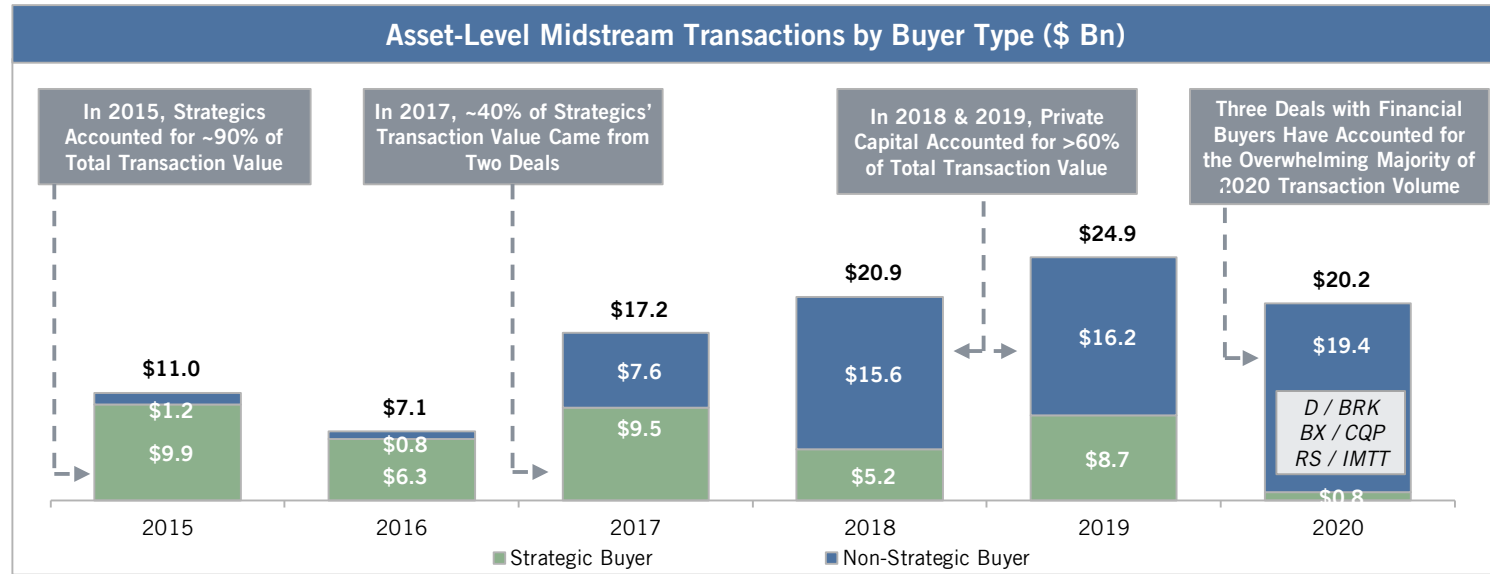
3 Decreased M&A

4 Reliable Cash Flows

5 LNG Growth

## Key Points

- 2020 experienced a fundamental shift in the types of buyers for midstream assets and the types of assets that have drawn investor interest
  - Strategics have largely spent the year on the sidelines
  - Three deals with financial buyers account for >95% of 2020 M&A volume
    - Berkshire Hathaway's acquisition of Dominion's midstream assets for \$10 Bn
    - Brookfield / Blackstone Infrastructure's acquisition of Blackstone Energy's ~42% interest in Cheniere Energy Partners for \$7 Bn
    - Riverstone's acquisition of IMTT for \$2.7 Bn
- Dramatic shift to demand-pull assets in 2020, with very few G&P asset transactions



# Investors No Longer Rewarding Growth; Increasingly Focused Cash Flow Quality

1 Volumetric Decline

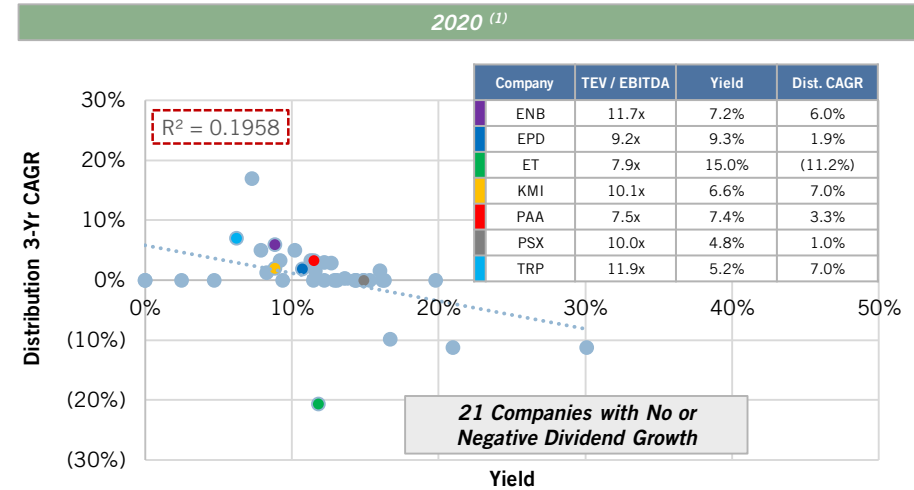
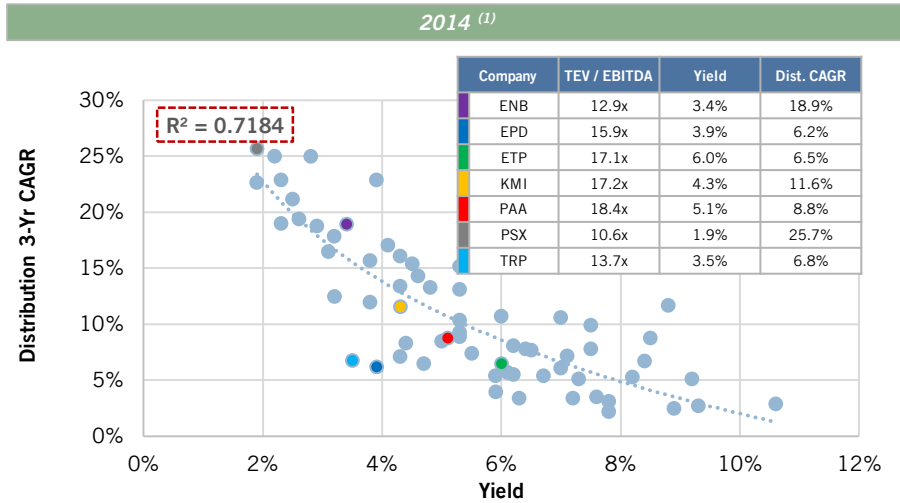
2 Utilities as Sellers

3 Decreased M&A

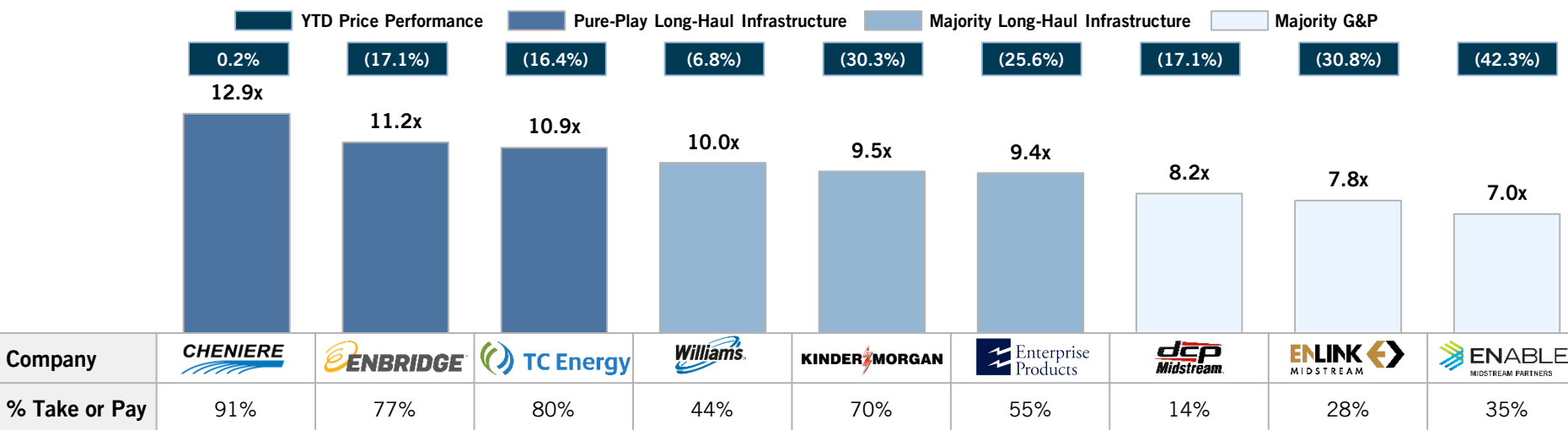
4 **Reliable Cash Flows**

5 LNG Growth

## The Relationship Between Distribution Growth and Yield Has Faded



## Expectations for Lower Production Growth Have Compressed Multiples for Volumetrically Exposed Midstream



Source: Wall Street research.

(1) Other companies include, but are not limited to: MMP, NS, CAPL, SUN, USAC, PBFX, CEQP, DKL, MPLX, HEP, NGL, WES, WMB, OKE, ENBL, DCP, GEL, etc.

# Global LNG Demand Normalizing to Pre-COVID Levels

1 Volumetric Decline

2 Utilities as Sellers

3 Decreased M&A

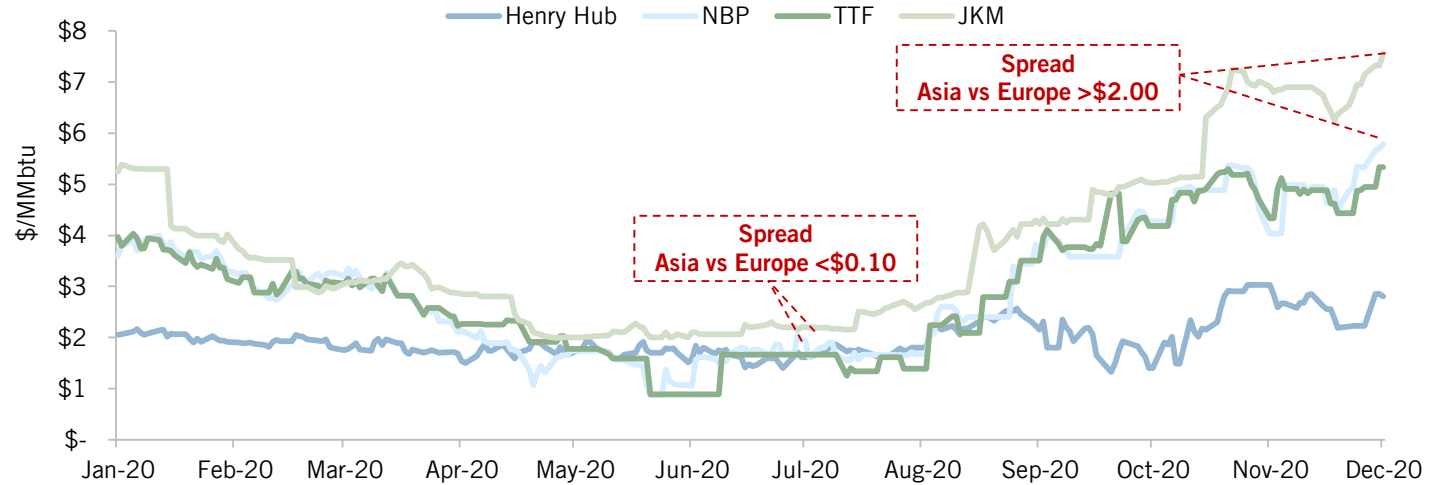
4 Reliable Cash Flows

5 **LNG Growth**

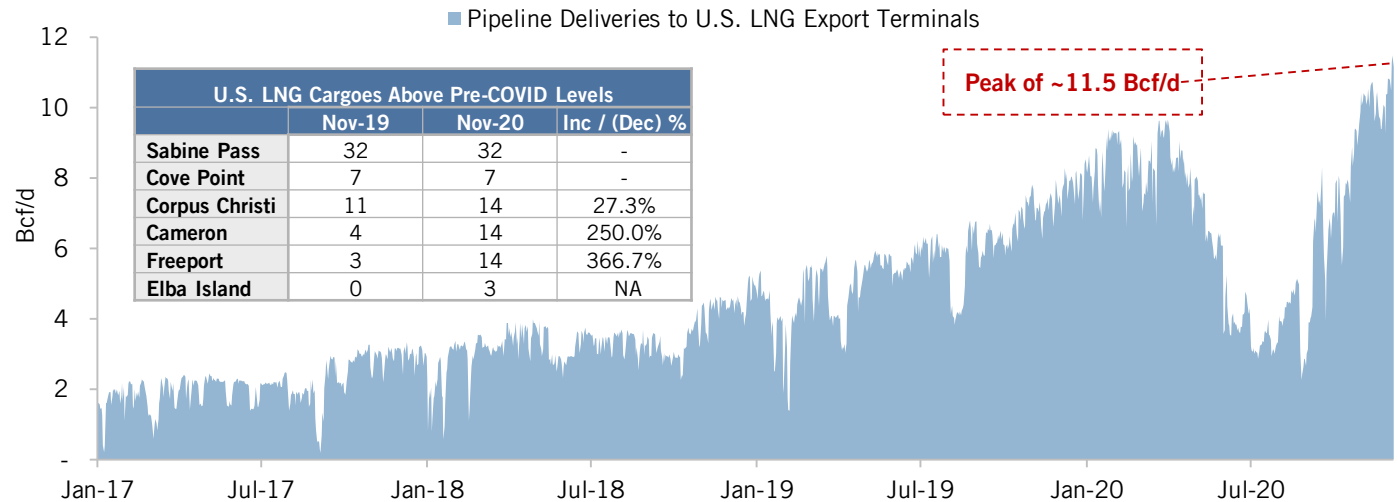
## Key Points

- After significant cargo cancellations due to COVID-19 amidst an overall decline in international demand, US LNG is quickly recovering to pre-COVID levels
- International pricing spreads have widened, allowing for marketing arms to take advantage of pricing arbitrages
  - As a result, both LNG inlet volumes and number of cargoes delivered recently hit all-time highs

## Gas Price by Region

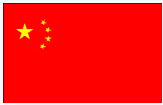
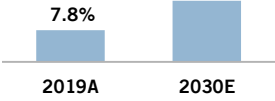
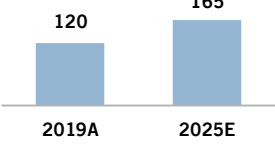

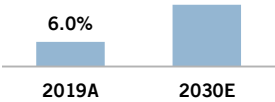


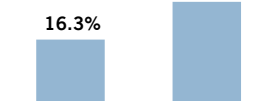



## Record Overseas Demand for American Gas



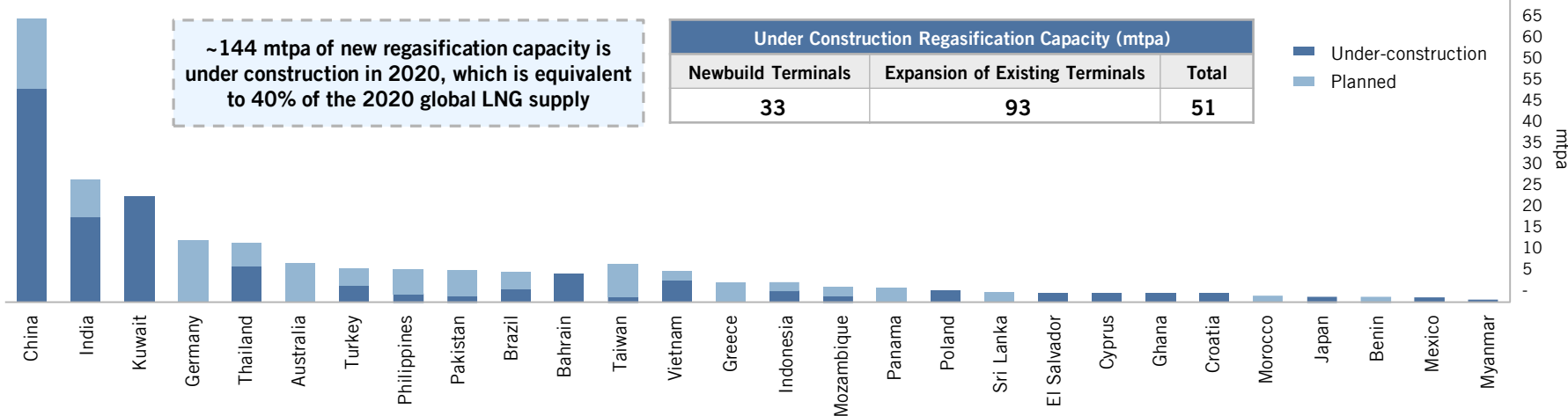
# Significant Capital Investment and Public Policy Steps Support Long-Term LNG Demand

- 1 Volumetric Decline
- 2 Utilities as Sellers
- 3 Decreased M&A
- 4 Reliable Cash Flows
- 5 LNG Growth

Market	Population	Gas as % of Total Primary Energy Demand	Regas Capacity	Pipeline Infrastructure Plans	Coal to Gas Conversion
 <b>China</b>	1.4 Bn			Double by 2025	19.7 GW gas-fired plants under construction to replace coal-fired plants
 <b>India</b>	1.4 Bn			Double by 2024	100 million metric tons converted to natural gas by 2030
 <b>South Korea</b>	52 MM			N/A	5.7 GW of gas-fired plants to replace coal-fired plants by 2034

## Despite the Economic Challenges of 2020, Global LNG Regasification Capacity Additions are the Highest in Ten Years

LNG Regasification Capacity Under Construction and Planned by 2025



Source: Bloomberg, World Bank, International Gas Union and Cheniere investor presentations.

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## **Oilfield Services Market Outlook**

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## Current Themes in the Oilfield Services

1

**Commodity Price  
Volatility and Macro  
Outlook**

Notwithstanding the recent oil price rally, E&P operators continue to work through a volatile commodity price environment that continuously balances an anticipated economic recovery driven by the proliferation of COVID-19 vaccinations and a “return to normal” against the threat of economic disruptions from rising infections and potential economic shutdowns

2

**Significant Reduction in  
E&P Capital Spending  
and Oilfield Service  
Activity**

In response to sharply lower commodity prices, E&Ps rapidly reduced capital spending programs resulting in a new “lower for longer” activity environment that most acutely impacted U.S. shale; market currently anticipating a recovery to take hold in 2H 2021

3

**Restructuring Underway  
and More to Come**

Diminished cash flow profiles, significant debt maturities and limited capital markets access accelerated Q2 and Q3 2020 corporate restructurings; outlook suggests distress likely to continue into 2021, which risks another wave of bankruptcies given 2021 and 2022 debt maturity wall

4

**M&A Activity Has  
Lagged But Expected to  
Accelerate**

Against this challenging backdrop, oilfield services M&A activity has suffered, but consolidation is expected to accelerate in 2021 as service providers seek to enhance scale, rationalize oversupplied markets and drive synergies in a difficult operating environment that includes an increasingly consolidated customer base

5

**ESG and Energy  
Transition Initiatives  
Have Begun In Earnest**

The recent downturn has accelerated oilfield service providers’ participation in the energy transition movement in an effort to repurpose valuable expertise, replace shrinking traditional oil and gas revenue and satisfy key stakeholder concerns

**We Expect the Above Themes to Set Up a More Constructive OFS Industry Backdrop in 2021**

# Oilfield Service Price Performance

1 Macro Outlook

2 Decline in Activity

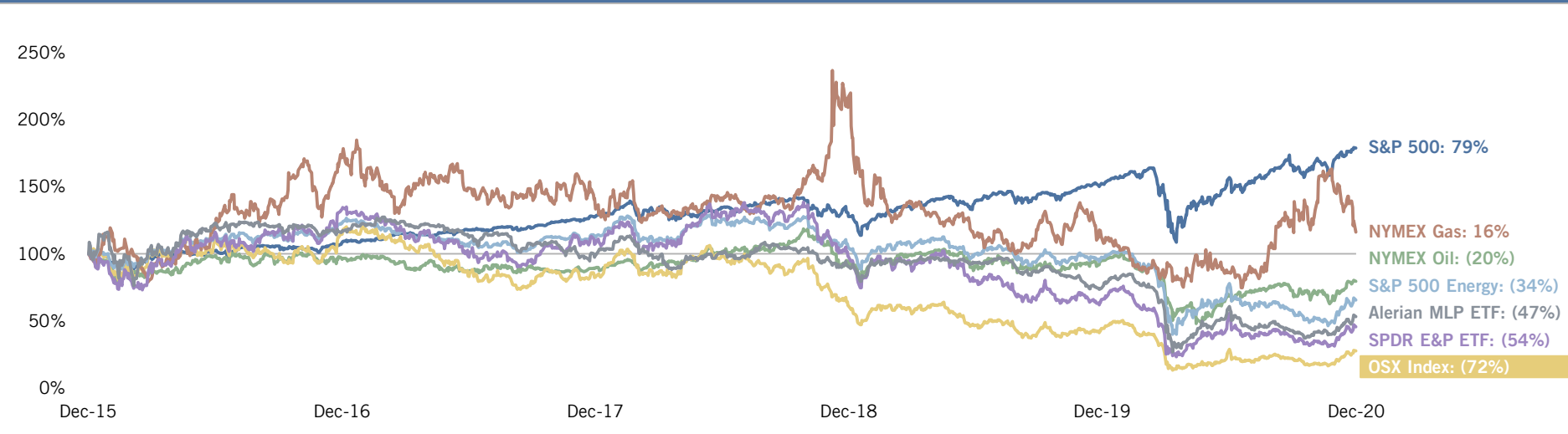
3 Restructuring Underway

4 Decreased M&A Activity

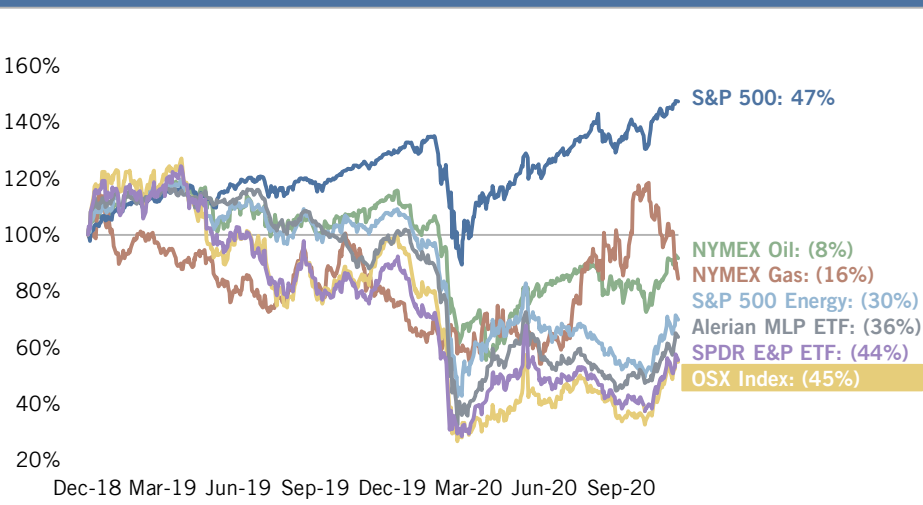
5 Increase in ESG Initiatives

Over the last five years, oilfield services has broadly underperformed commodity prices as well as the upstream and midstream subsectors

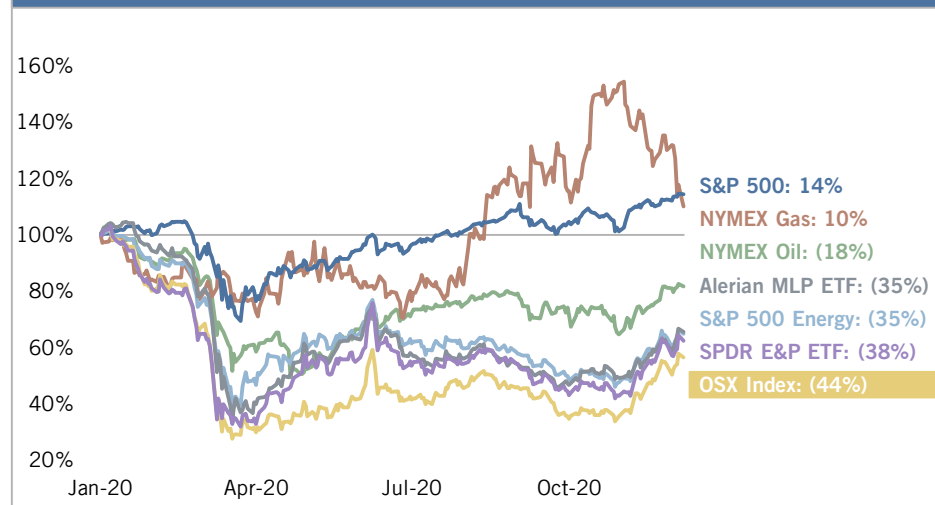
## OSX Price Performance vs. Various Indices – Last 5 Years



## OSX Price Performance vs. Various Indices – 2019 to Present



## OSX Price Performance vs. Various Indices – YTD



Source: CapitalIQ database. Market data as of 12/07/20.



# E&P Capital Spending Outlook

1 Macro Outlook

2 Decline in Activity

3 Restructuring Underway

4 Decreased M&A Activity

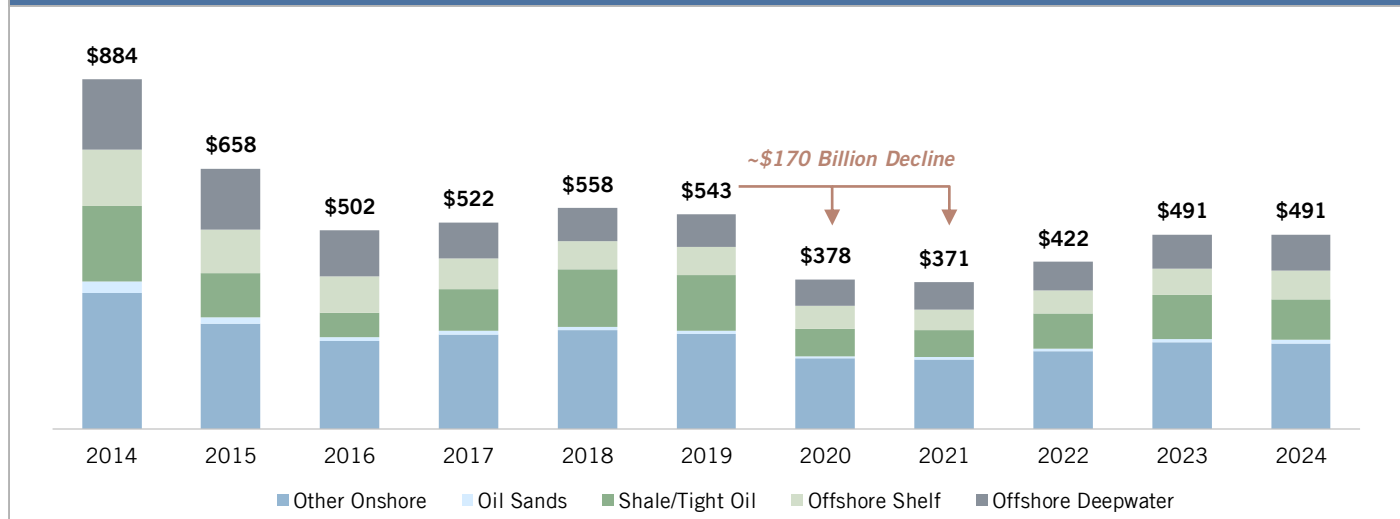
5 Increase in ESG Initiatives

Currently the Market Expects 2021 E&P Capital Budgets to be Relatively Flat Compared to 2020 levels, however Budgets remain ~ \$150 Billion below 2019 Spending

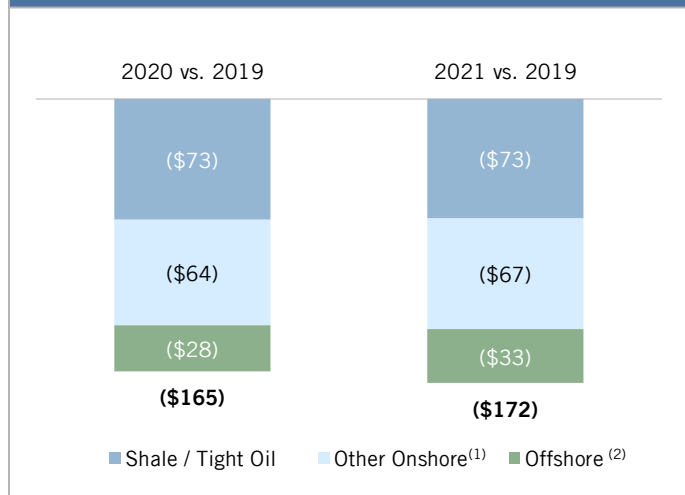
## Key Points

- In response to the precipitous crude oil price decline, E&Ps dramatically reduced 2020 capital budgets by ~\$165 billion and are expected to cut 2021 budgets by a further ~\$10 billion
  - Current outlook suggests modest recovery in 2022 with E&P spending remaining below pre-pandemic levels through 2024
- Cuts most acutely focused on U.S. shale which have fallen ~\$75 billion from 2019 levels, a year-on-year decline of more than 50%
- Offshore to see more moderate cutbacks (\$25 – \$35 billion), with reductions mainly to exploration and infill drilling programs

## Upstream Investment by Supply Source (\$ Billions)



## Upstream Investment vs. 2019 Levels



## Upstream Investment by Supply Source

	2020 vs. 2019	2019 - 2024 CAGR
Offshore Deepwater	(18.4%)	2.2%
Offshore Shelf	(17.8%)	0.6%
Oil Sands	(40.3%)	(0.1%)
Other Onshore	(25.3%)	(2.0%)
Shale / Tight Oil	(51.7%)	(6.4%)

Source: Rystad Energy.

(1) Includes Oil Sands and Other Onshore.

(2) Includes Offshore Shelf and Offshore Deepwater.

# U.S. Onshore Drilling Rig Outlook

1 Macro Outlook

2 Decline in Activity

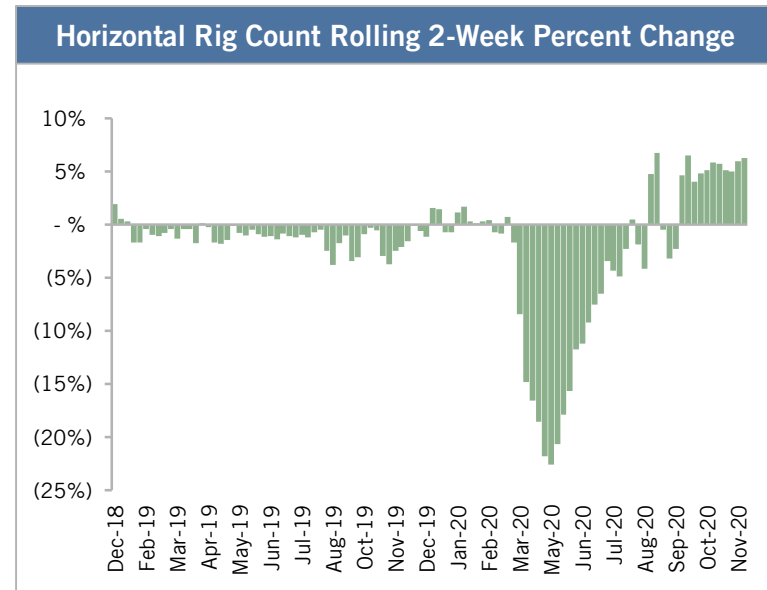
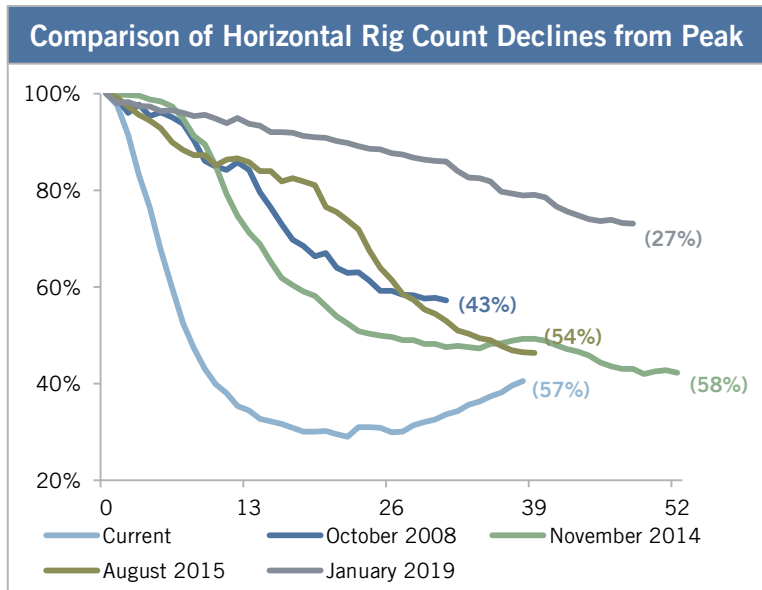
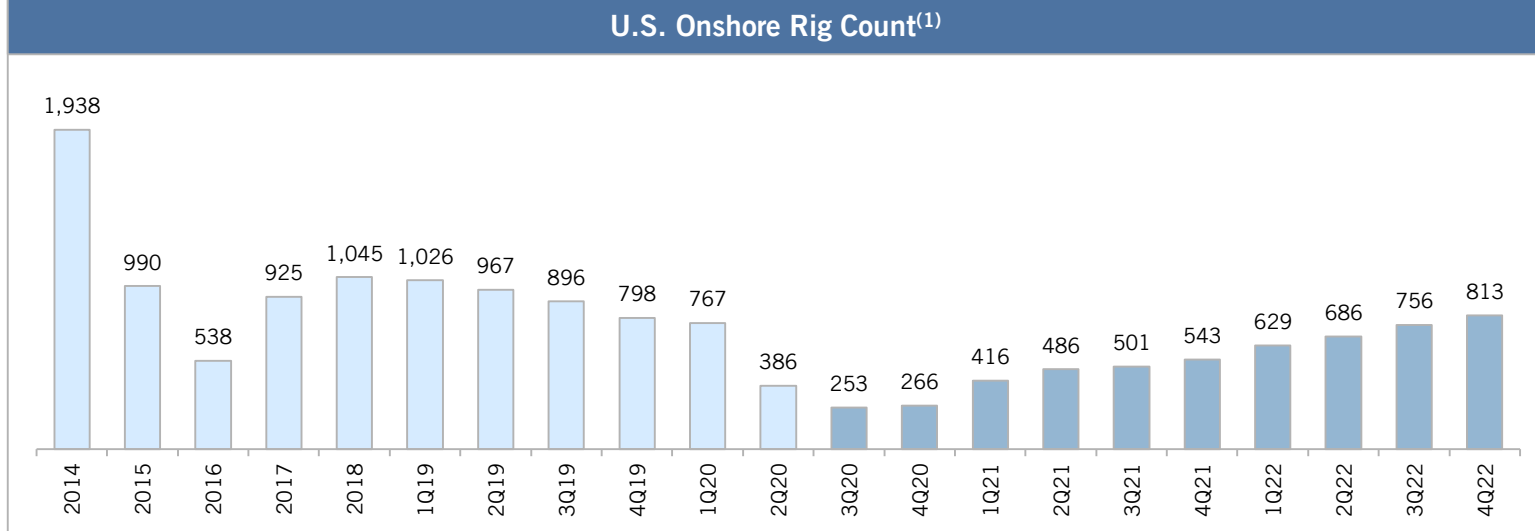
3 Restructuring Underway

4 Decreased M&A Activity

5 Increase in ESG Initiatives

## Key Points

- U.S. rig count now stands at 323, falling ~450 rigs since mid-March, which represents the steepest and deepest rig count decline in the unconventional era
  - However, U.S. rig count has steadily recovered since early September
  - Rig Count has increased by 79 rigs by mid-December from August lows, and has experienced 13 straight weekly increases<sup>(2)</sup>
- The near-term onshore drilling outlook remains challenged under a range of scenarios
  - Initial declines surpassed original downside expectations
  - Outlook for rig count to remain depressed in Q4 2020 with a more meaningful recovery occurring in Q1 2021 and beyond



Source: Rystad Energy ShaleIntel, Baker Hughes Rig Count, Spears and Associates and company filings and presentations.  
 (1) Forecast represents Rystad Energy Base Case which includes 2020, 2021 and 2022 WTI prices of \$37/Bbl, \$44/Bbl and \$66/Bbl, respectively.  
 (2) Per Baker Hughes rig count as of December 11, 2020.

# U.S. Completion and Pressure Pumping Outlook

1 Macro Outlook

2 Decline in Activity

3 Restructuring Underway

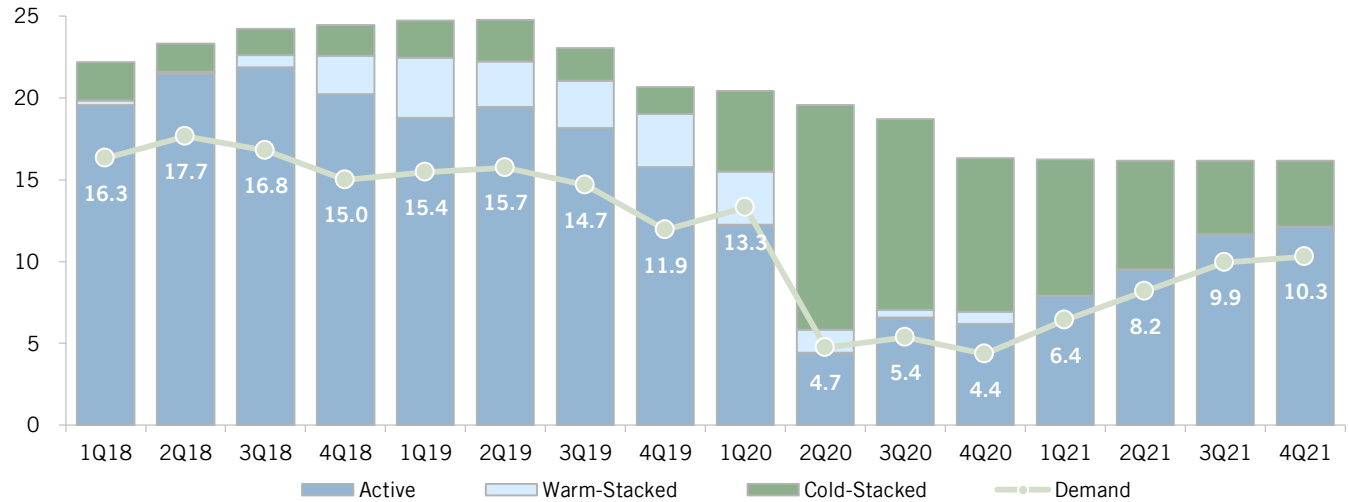
4 Decreased M&A Activity

5 Increase in ESG Initiatives

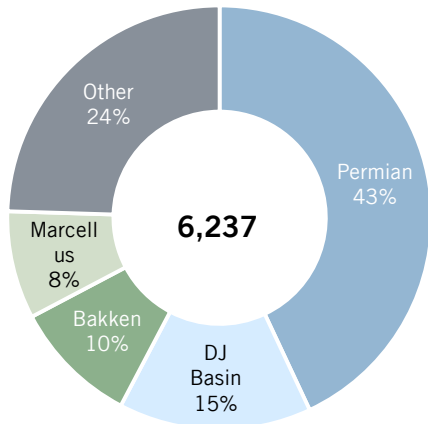
## Key Points

- Completion activity has rebounded from the April / May 2020 trough, as operators elected to accelerate completion of DUC inventories after instituting a “frac holiday” in Q2 2020
  - However, current and future activity levels expected to remain well below pre-pandemic levels
- Completion activity likely to outpace drilling activity due to drawdown of DUC inventory
- Outlook for pressure pumping demand to increase more meaningfully, beginning in Q1 2021 as operators reset their capital budgets

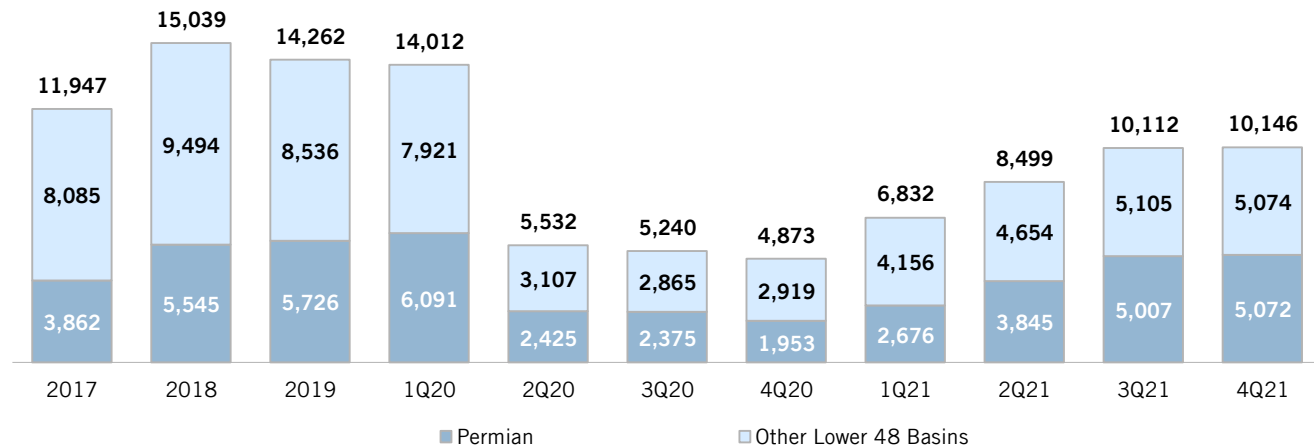
## Pressure Pumping Horsepower Supply vs. Demand (MM HHP)



## Q4 2020 Hz DUC Inventory



## Lower 48 Horizontal Wells Frac'd <sup>(1)</sup>



Source: EIA and Rystad Energy ShaleIntel.

(1) Base case assumes WTI prices of \$37/Bbl and \$44/Bbl in 2020 and 2021, respectively. Quarterly figures were annualized for comparison purposes.

# Lower 48 Well Count and Production Outlook

1 Macro Outlook

2 Decline in Activity

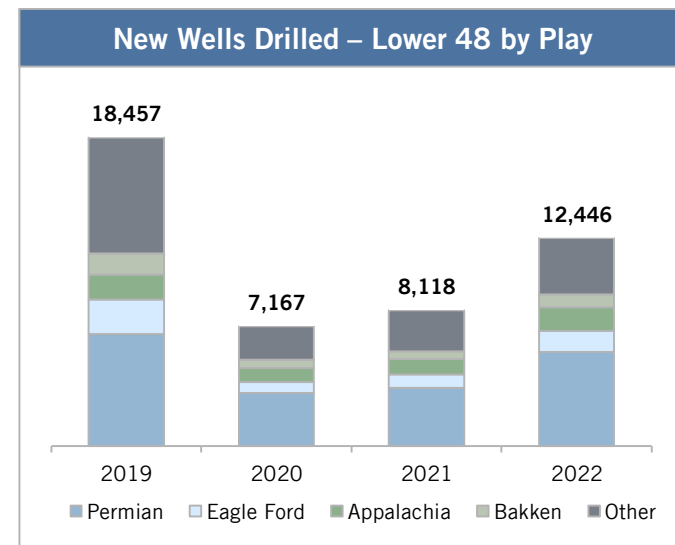
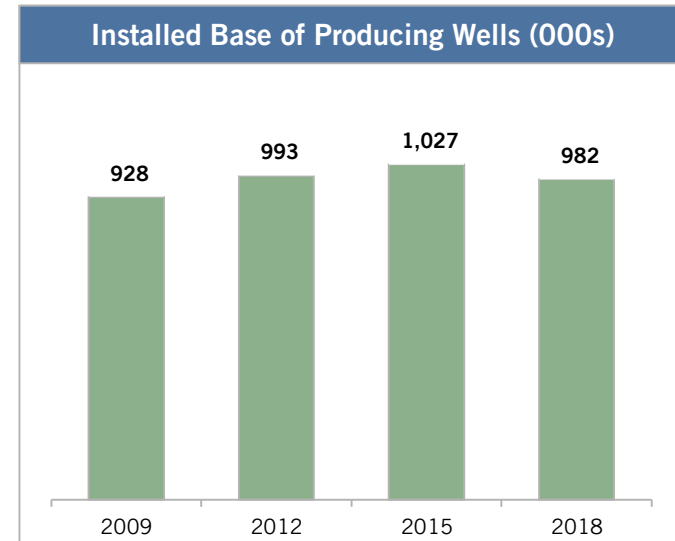
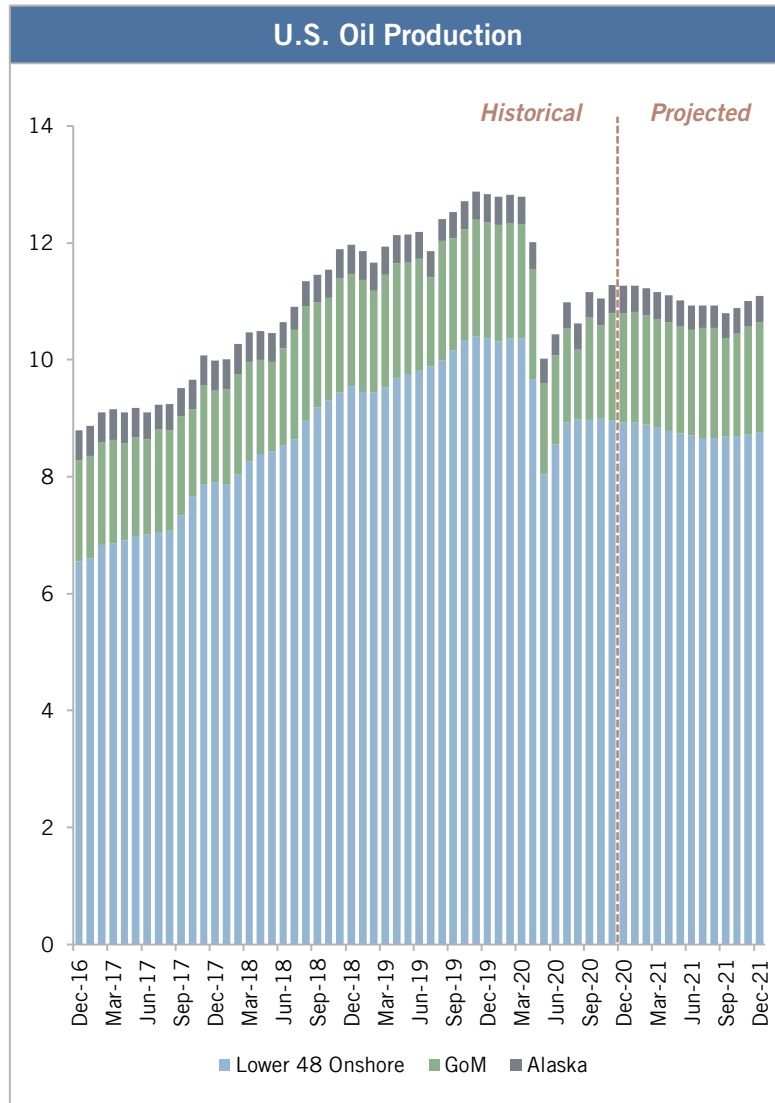
3 Restructuring Underway

4 Decreased M&A Activity

5 Increase in ESG Initiatives

## Key Points

- U.S. oil production remains relatively resilient and is expected to largely maintain current production levels, depending on the commodity price outlook
- In September, the domestic oil product rebounded to nearly 11MMbbl/d as production growth from the GoM outpaced modest production declines from Lower 48 onshore sources
  - Since then, production has held flat around 11MMbbl/d
- Expectations for Lower 48 onshore production to remain in the 8.5 – 9.0MMBbl/d range through 2021
  - Similar outlook for GoM and Alaska production which are expected to maintain current levels of 1.7 – 2.0MMbbl/d and ~0.5MMBbl/d, respectively
- Outlook suggests a more constructive environment for production focused services versus those that are more drilling & completion-driven
  - Supported by installed base of nearly one million producing wells



# Offshore Project Outlook

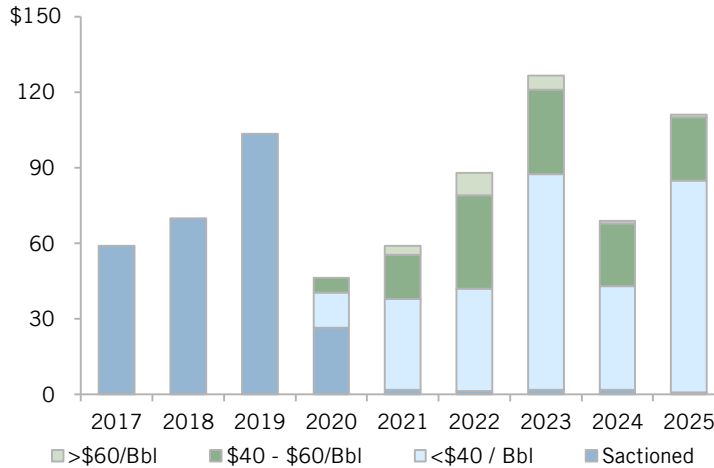
## 1 Macro Outlook

### Key Points

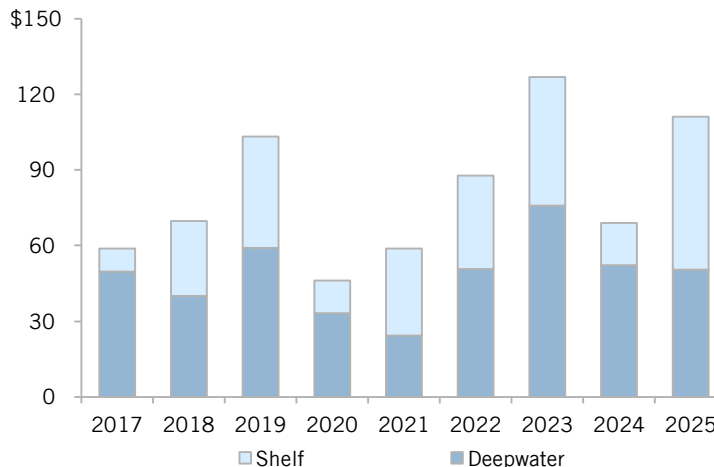
- In response to recent headwinds, E&Ps quickly reduced capital budgets, which included delaying certain projects expected to be sanctioned in 2020
  - 19 high profile projects have already been postponed
  - Operators reworking development plans to optimize costs for the new commodity price regime
- Meanwhile, several projects sanctioned in early 2019 are likely to move forward, although timelines may be delayed not only by reworked project parameters but also by social distancing restrictions slowing construction and drilling
- Expectation for 2020 FIDs to total approximately \$25Bn versus more than \$100Bn of new project investments in 2019
- Increasing probability that activity will improve in 2021; however, likely to require Brent prices above \$45/Bbl
  - Current outlook suggests FIDs recover to \$70Bn in 2021

## 2 Decline in Activity

### Global Offshore Commitments by Breakeven Price (\$Bn)



### Global Offshore Commitments by Depth (\$Bn)



## 3 Restructuring Underway

## 4 Decreased M&A Activity

## 5 Increase in ESG Initiatives

### FIDs – Delayed / Postponed

Asset	Country	Operator
Atlanta FDS	Brazil	Enauta
Barossa	Australia	Santos
Bay du Nord	Canada	Equinor
Browse	Australia	Woodside
Cambo (Phase 1)	U.K.	Siccar Point
Claire South	U.K.	BP
Crux	Australia	Shell
Jackdaw	U.K.	Shell
Neptun Deep	Romania	ExxonMobil
North Platte	U.S.	Total
Pecan	Ghana	Aker Energy
Platypus	U.K.	KNOG / Dana
Pluto Train 2	Australia	Woodside
Rovuma LNG (Area 4)	Mozambique	ExxonMobil
Scarborough	Australia	Woodside
Sea Lion	Falkland Islands	Premier Oil
Shenandoah	U.S.	LLOG
Structure A and E	Libya	Eni
Whale	U.S.	Shell

# Offshore Activity Outlook

1 Macro Outlook

2 Decline in Activity

3 Restructuring Underway

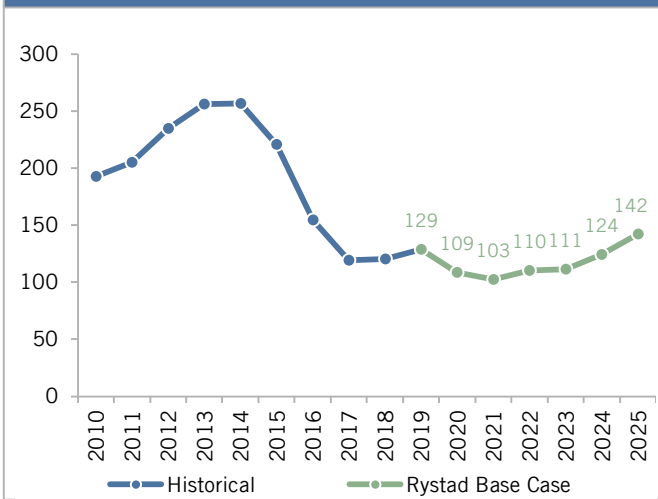
4 Decreased M&A Activity

5 Increase in ESG Initiatives

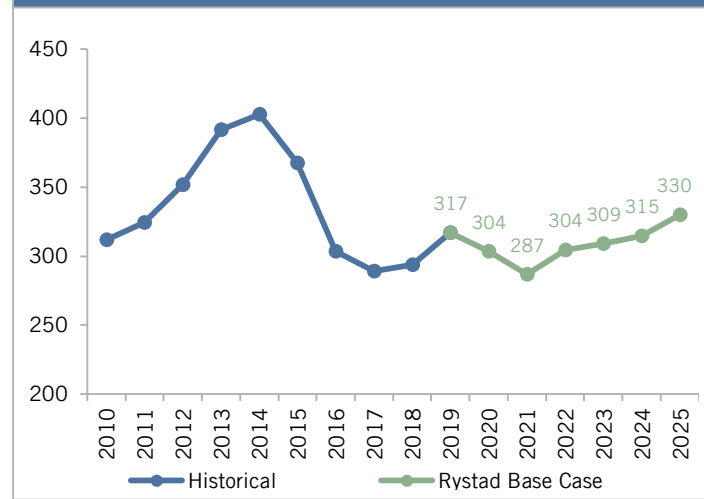
## Key Points

- While many FIDs have been delayed, a significant amount of development activity is expected to move forward in 2021, providing a demand floor until a potential recovery
  - Operators restriction of exploration spending in 2020 expected to continue in 2021
- Outlook for floater demand to decline to nearly 100 rigs years, differing opinions regarding timing (trough reached in 2021 vs. 2022)
  - In the near-term, activity to skew towards mid- and deepwater projects
- Outlook for jackup demand reflects a similar dynamic and is expected to decline to nearly 285 rigs years in 2021 and slowly recover thereafter
  - As was the case during the prior downturn, the jackup market saw a shallower demand decline due to the resilient nature of shallow water projects; benefit from existing infrastructure, shorter development cycles and lower costs
  - Jackup demand also benefits from strong NOC demand, which tends to be less cyclical, helping to stabilize utilization in key markets (i.e., Middle East, Asia Pacific, Mexico)

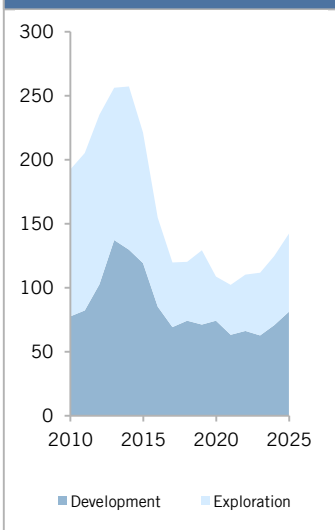
### Floater Market Outlook – Floaters Demand (Rig Years)



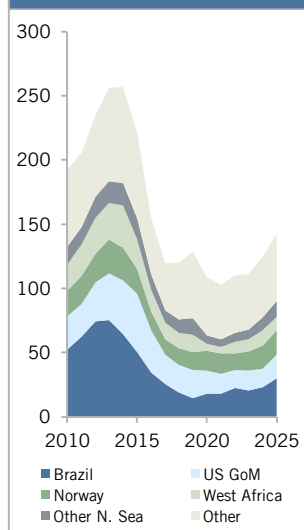
### Jackup Market Outlook – Jackup Demand (Rig Years)



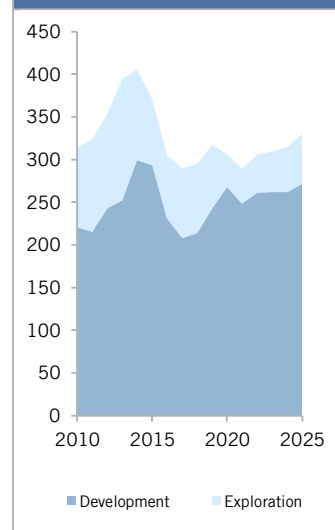
### Floater Dem. by Activity<sup>(1)</sup>



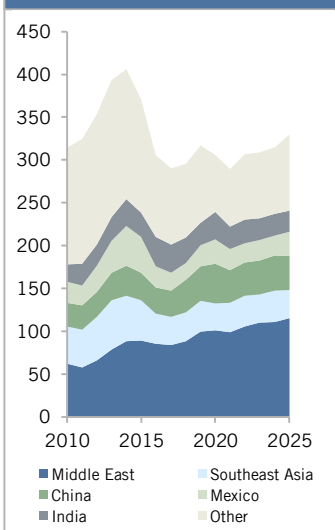
### Floater Dem. by Geography<sup>(1)</sup>



### Jackup Dem. by Activity<sup>(1)</sup>



### Jackup Dem. by Geography<sup>(1)</sup>



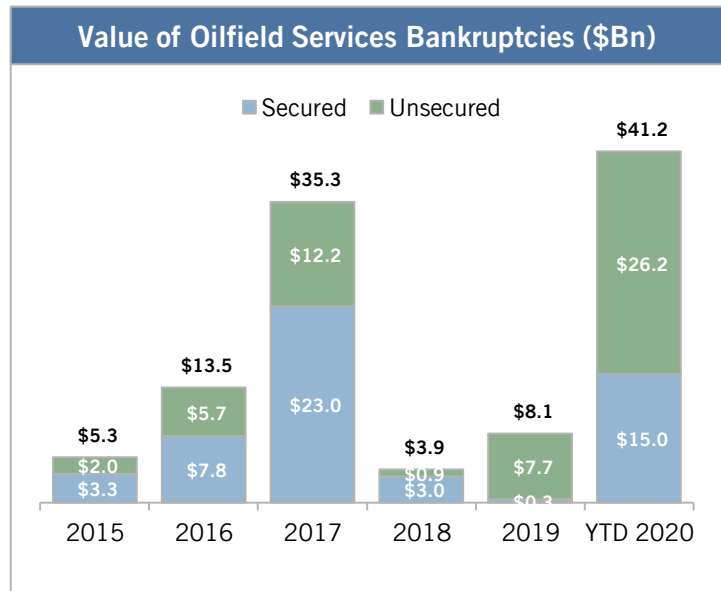
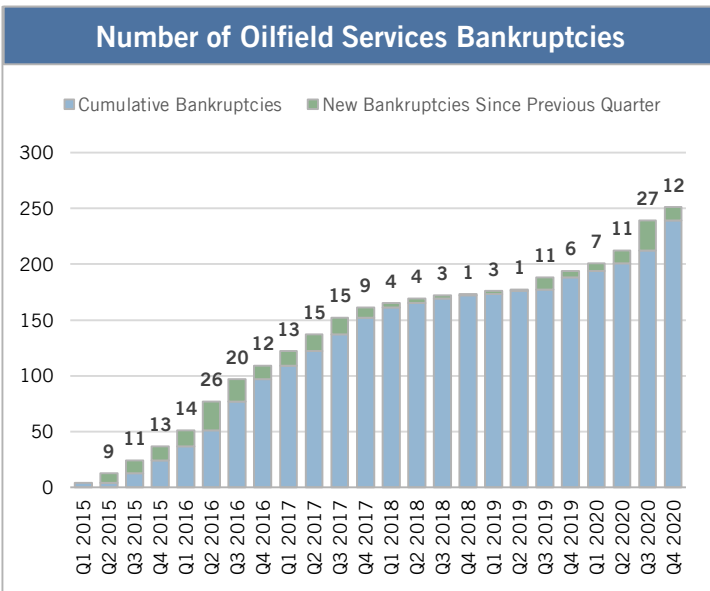
Source: Wall Street research and Rystad Energy.  
 (1) Per Rystad Energy Base Case forecast.

# Summary of Distressed OFS Situations

- 1 Macro Outlook
- 2 Decline in Activity
- 3 Restructuring Underway
- 4 Decreased M&A Activity
- 5 Increase in ESG Initiatives

### Key Points

- Through November, ~\$41Bn of total oilfield services liabilities filed for bankruptcy in 2020
  - Compares to ~\$13Bn in 2016 and ~\$35Bn in 2017 total liabilities restructured
- Pace of bankruptcy filings accelerated in Q2 and Q3 2020, which saw 11 and 27 oilfield services bankruptcies, respectively
- Diminished cash flows as a result of a “lower for longer” activity environment, risks another wave of bankruptcies given the sector’s 2021 and 2022 debt maturity wall



Source: Haynes & Boone, LLP Oilfield Services Bankruptcy Tracker (November 2020) and company filings.

# Significant Slowdown in Oilfield Services M&A Activity

1 Macro Outlook

2 Decline in Activity

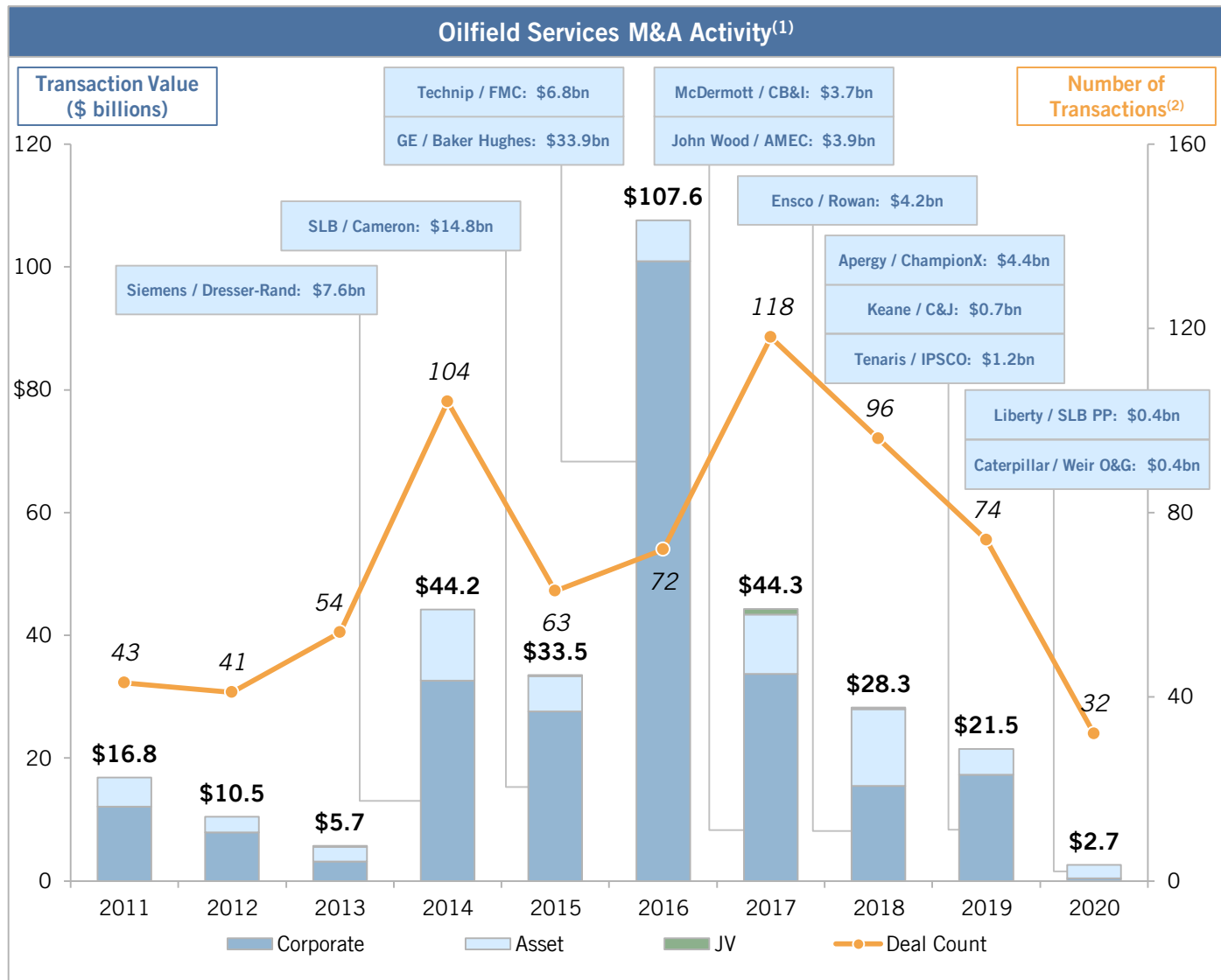
3 Restructuring Underway

4 **Decreased M&A Activity**

5 Increase in ESG Initiatives

## Key Points

- Oilfield Service M&A transaction volume decreased for the third straight year to the lowest level in recent history
  - 32 transactions greater than \$10 million announced in 2020 vs. 74 in 2019 and 96 in 2018
- Largest 2019 OFS transactions include:
  - Apergy / Ecolab's ChampionX (\$4.4Bn)
  - Tenaris / IPSCO (\$1.2Bn)
  - Keane / C&J (\$0.7Bn)
  - DP World / Topaz Energy and Marine (\$1.1Bn)
- Largest 2020 OFS transactions include:
  - Liberty / Schlumberger Pressure Pumping (\$0.4Bn)
  - Caterpillar / Weir Oil & Gas (\$0.4Bn)
- Expectations for rebound in Oilfield Service M&A activity in 2021 as restructured companies emerge from bankruptcy



Source: PLS database.

(1) Includes water services and infrastructure transactions.

(2) Includes transactions with reported transaction values greater than \$10 million.



# Oilfield Service Participation in ESG and Energy Transition

1 Macro Outlook

2 Decline in Activity







3 Restructuring Underway

4 Decreased M&A Activity

5 Increase in ESG Initiatives

## Key Points

- Oilfield services companies have begun to strategically ramp up clean energy initiatives
- Given applied expertise in EPCI and O&M support, oilfield service providers are uniquely positioned to actively participate in the energy transition
- Several companies have recognized the potential to supplement shrinking upstream revenue with emerging clean energy projects
- Most immediately, the industry can participate in the energy transition through two primary avenues:
  - Improved operational efficiency and solutions for legacy hydrocarbon development
  - Application of seasoned expertise to clean energy infrastructure development
- Stemming from initial ESG initiatives, several oilfield services companies have pledged meaningful long-term carbon footprint reduction targets

1 ESG Initiatives for Legacy Hydrocarbon Development		
Focus Area	Select Companies	Commentary
<b>Minimizing Flaring, Venting &amp; Fugitives</b>		<ul style="list-style-type: none"> <li>Flaring, venting and leaks account for more than half of oil-related emissions</li> <li>To reduce flaring, eliminate venting and pinpoint fugitive emissions, OFS companies have begun developing advanced sensing, control and capture technologies</li> </ul>
<b>Utilizing Wellhead Gas as Fuel Source</b>		<ul style="list-style-type: none"> <li>The provision of fuel is one of the principle costs facing well service operators</li> <li>Recognizing the financial and environmental implications of diesel fuel, OFS companies have started to use wellhead gas to fuel operations at a well site, most clearly evidenced by the proliferation of electric frac equipment</li> </ul>
<b>Recycling of Water</b>		<ul style="list-style-type: none"> <li>Unconventional development has rapidly expanded the industry's water footprint</li> <li>To mitigate issues of sustained freshwater sourcing and wastewater treatment, service providers have started to treat and reuse wastewater</li> <li>With the surge in freshwater prices, recycling produced and flowback water can also lower costs</li> </ul>
2 Energy Transition and the Intersection with Oilfield Service Companies		
Focus Area	Select Companies	Commentary
<b>Carbon Capture and Storage ("CCUS")</b>		<ul style="list-style-type: none"> <li>Carbon capture technologies are a critical component to reaching long-term emissions targets</li> <li>With expertise in gas compression &amp; processing, pipelines, petroleum EPCI and geoscience, oilfield service providers are qualified to execute CCUS projects at an industrial scale</li> </ul>
<b>Offshore Wind</b>		<ul style="list-style-type: none"> <li>Wind provides a unique opportunity for unlocking supplemental revenue streams, especially for offshore service providers that have experienced substantial activity reductions from prior peak</li> <li>Due to the overlap of equipment, engineering &amp; construction and operations &amp; maintenance, OFS companies have begun to spearhead EPCI and O&amp;M projects for commercial scale offshore wind projects</li> </ul>
<b>EPCI and O&amp;M for Solar Installations</b>		<ul style="list-style-type: none"> <li>Oilfield EPCI and O&amp;M expertise also translates well to the solar market</li> <li>The overlap of equipment, including converter &amp; inverters, switchgear and electrical equipment, well positions OFS companies to assist in the develop solar infrastructure</li> <li>Certain service companies have undertaken EPCI roles in solar project development</li> </ul>

Source: Rystad Energy and other publicly available information.

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## Leveraged Finance and Restructuring Outlook

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# Current State of Liability Management Transactions

## 1 Bonds Remain Primarily in the Hands of Long-Term, Real-Money Investors

- Unlike previous credit cycles, large asset managers continue to hold the majority of the outstanding stressed and distressed notes outstanding
- With limited investor turnover, basis remains elevated thus increasing the difficulty to execute liability management transactions

## 2 Investors are Unwilling to Crystallize a Loss and Take a Discount to Solely Benefit the Equity

- Investors will entertain par exchanges which may be enhanced by equity upside
- There is a willingness to aid companies with a large, transformational recapitalization; however, these are complicated transactions and require significant coordination

## 3 Ad Hoc Creditor Groups are Forming Quickly and are Holding Their Ground














- Given the number of stressed and distressed credits along with investor connectivity, Ad Hoc credit groups are forming quickly
- The creditor groups have been reticent to break rank once formed

## 4 Alternative Capital Providers Offer Flexible Solutions via Asset and Equity Consideration

- Alternative capital providers are willing to take a creative approach to create mutually-attractive financing solutions
- The ability to pair cash flowing assets and equity / equity-like securities is an appealing path to create value for investors while reducing the cost of capital to issuers

# Key Recent Upstream Contract Rejections / Renegotiations

- Distressed upstream businesses increasingly looking to midstream providers for concessions in various forms including: (i) rate reductions, (ii) volume commitment changes and (iii) drill incentives, among others
- Midstream businesses have started to actively negotiate with upstream companies and potential buyers in a number of situations as an alternative to litigation
- The significant in court issue remains the argument regarding contracts that have covenants running with the land such as Chesapeake, Extraction, and Southland and the different jurisdictions that the law is being interpreted
- Additionally, interstate pipelines regulated by FERC have been rejected in several cases and are currently on appeal

E&P Operator					
Midstream Service Provider		TALLGRASS ENERGY 	 	 	TALLGRASS ENERGY  
Date Filed	1/27/2020	5/14/2020	6/14/2020	6/28/2020	11/13/20
Court	Delaware	Texas	Delaware	Texas	Texas
Judge	Karen Owens	Marvin Isgur	Chris Sontchi	David Jones	David Jones
Description	<ul style="list-style-type: none"> <li>2 G&amp;P agreements with minimum volume commitment</li> </ul>	<ul style="list-style-type: none"> <li>Firm transportation contract on the Rockies Express pipeline that shipped gas east</li> <li>G&amp;P contract with Pinedale LGS that gathered infield volumes; assets previously owned by UPL</li> </ul>	<ul style="list-style-type: none"> <li>Extraction attempting to reject numerous contracts in bankruptcy</li> <li>Focus thus far has been on oil gathering and transportation agreements (Grand Mesa/NGL, Elevation, and ARB Midstream)</li> </ul>	<ul style="list-style-type: none"> <li>ETC inter-state firm transportation contract for Haynesville assets</li> <li>Williams (Access) gathers and processes volumes across the Chesapeake legacy asset base</li> </ul>	<ul style="list-style-type: none"> <li>Immediately moved to reject 6 of 17 long-haul gas transportation contracts across 4 different midstream operators as well as 3 G&amp;P agreements</li> </ul>
Commentary	<ul style="list-style-type: none"> <li>Week long trial in Delaware court in September</li> <li>Of the two gathering agreements, Southland is trying to reject the contract with less-favorable terms</li> <li>Bank syndicate arguing to reject the contract as it has transferred value to Williams that would otherwise be subject to liens from their loan</li> </ul>	<ul style="list-style-type: none"> <li>Two key elements of the rejection include: (i) satisfaction of the business judgement standard (estate better off) and (ii) no interruption of gas supply to customers as a result of the rejection</li> <li>Rockies Express contract was rejected</li> <li>Pinedale LGS contract (structured as a leaseback financing) was due to be rejected, however, the system was acquired by UPL in bankruptcy for \$18 MM (original lease required annual payments of \$20 MM through 2027)</li> <li>FERC has filed two appeals: (i) related to the ruling and (ii) related to the bankruptcy courts ability to reject FERC-regulated contracts</li> </ul>	<ul style="list-style-type: none"> <li>On October 14, Judge Sontchi ruled that Grand Mesa (NGL), Platte River/DJ South (ARB Midstream), and Elevation contracts do not create covenants "running with the land"</li> <li>On November 2, Judge Sontchi granted Extraction's motion to reject its transportation services agreements, applying the deferential business judgment standard instead of a heightened public interest standard that was requested by midstream counterparties</li> <li>Extraction rejected its Grand Mesa and Platte River contracts; however, the company reached an agreement with Elevation prior to ruling that included a settlement with a damage claim</li> </ul>	<ul style="list-style-type: none"> <li>On October 28, Judge Jones approved CHK's motion to reject its gas purchase agreement with ETC, ruling that the contract does not establish a covenant "running with the land"</li> <li>Decision currently on appeal</li> <li>On December 17, Williams received court approval of a global resolution it reached with Chesapeake to end litigation</li> </ul>	<ul style="list-style-type: none"> <li>Plan approval conditioned on 50% reduction of firm transportation reservation fees</li> <li>Rejected long-haul contracts include Rockies Express (Tallgrass/P66), ANR Pipeline (TCP), two Texas Gas contracts (TCP), and Rover (ET)</li> <li>Filed an adversary proceeding against Midship (Cheniere) seeking punitive damages for an improper draw of letters of credit</li> <li>Rejected G&amp;P agreements includes Rice Olympus Midstream (Equitams), Strike Force (Equitrans), and DCP NGL Services (DCP)</li> </ul>