CALASH

Energy Outlook

Q1 2019

Asking the Right Questions

As an advisor to different organisations in the energy industry, I am often asked to give an opinion on the market. Perhaps the most common question in the service sector is *"When will prices rise and the service sector see a recovery?"*

It's not surprising that people ask this, considering the macro-market trends, intervention, CAPEX and transaction analyses set out in this report. Right now the majority of E&P Operators with producing assets have positive cashflows and are rebuilding their balance sheets, but they are still reluctant to let service costs rise. While the level of distress caused by cost pressure has increased in some areas - e.g. asset-heavy and fabrication contractors - in general the supply chain has adapted to a lower-cost environment.

However, this question begs another: *"Why would Operators let prices rise?"* Are they and their shareholders just nice guys who are happy to share their margin? Operators have been heavily criticised over the last few years for poor project management and associated cost control, so why would they provide additional support to a hungry, leaner service market? Unless there is long-term shortage of equipment or personnel that drives competition and boosts their pricing power, it's simply not going to happen.

The question that companies should instead be asking is *"What kind of business are we going to be, and how can we do something to disrupt our market?"*

This is a question of strategy, not cost containment. At Calash, we frequently see service companies confuse operational efficiency with strategy. It is a fundamental job of management to improve the services supplied and reduce costs for their clients. A more valuable role (and this is where Calash sometimes comes in) is how to increase margin and market share at the expense of competitors.

We work with clients to help them address these challenges; consider new strategic initiatives, reduce costs and deliver the benefits of digitisation, technology, operational reliability, efficient purchasing, safety, and routes to market, focusing on delivering additional value to their clients in the medium-to-long-term.

There are still many opportunities in the service sector, but they will only be exploited by the businesses that ask the right questions rather than waiting for the money and the market to come to them.

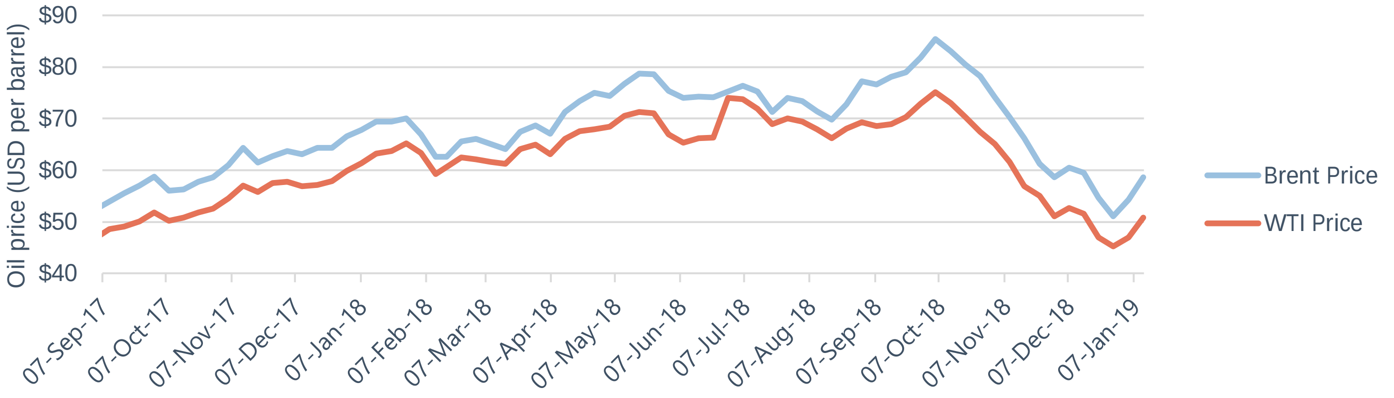
Group CEO Alan Evett has been delivering strategic value to energy businesses around the world throughout his career, specialising in services to the downhole, process, pipeline and inspection markets.

Macro Market Trends – Oil Price

The end of 2018 was a disappointing period for the oil industry with prices dropping nearly $25 per barrel between mid-October and December. Surging Saudi production and better than expected US shale performance led to a production surplus which, combined with the US and China trade wars, prompted the sudden price swing.

OPEC responded to the price drop with a 1.2 million barrel per day production cut coming into force in January which has already started to steady the market, allowing oil prices to begin recovering again. Key to this recovery will be how far Iranian oil exports drop by May, something which we will be keeping a close eye on through early 2019.

Historic Brent and WTI Spot Oil Prices | *EIA 2019*



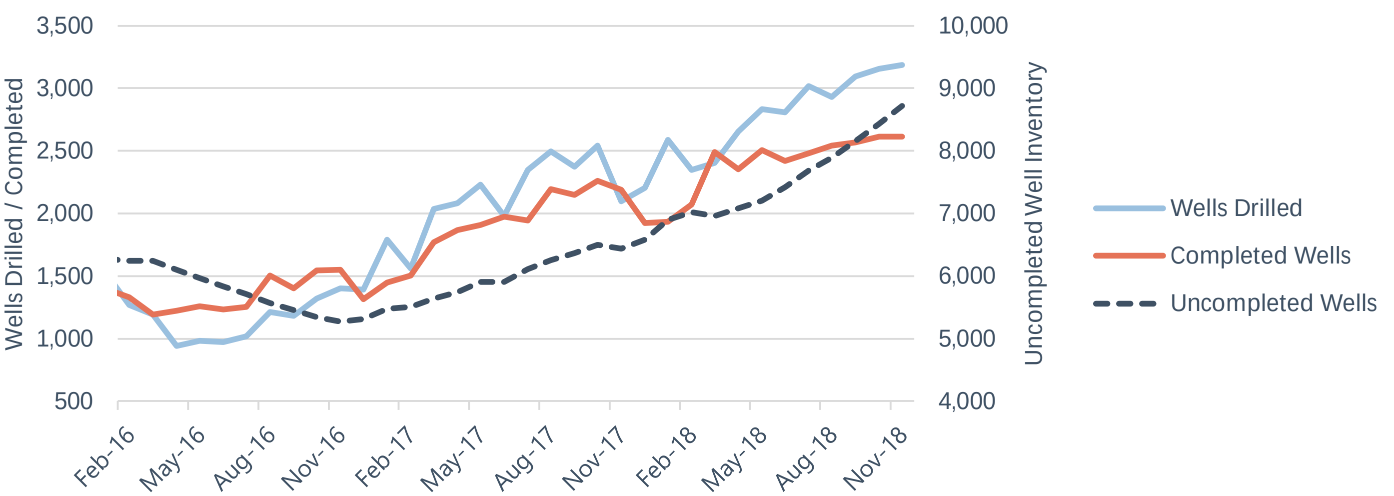
Macro Market Trends – US Onshore Activity

Continued growth in US onshore drilling and completion activity was a key factor in prompting oil prices to fall in Q4 2018. However, since January 2017 fewer wells are being completed than are being drilled. As a result the number of uncompleted wells has grown by over 3,200, reaching 8,723 last November.

Insufficient infrastructure and pipeline capacity is behind this trend, demonstrating that US activity growth cannot continue at its current rate without essential midstream upgrades.

These upgrades are coming however, with a marked increase in midstream CAPEX in 2017/18. Once complete, we expect an increased demand for fracking and completion services from these uncompleted wells as Operators seek to bring assets online. Also expect continuing growth in inspection and other life of field services for midstream assets.

US Drilling and Completion Activity | *EIA 2018*



Cameron Lynch, President Calash USA, has an engineering background with over 12 years of oilfield service and equipment expertise covering capital equipment design and procurement, manufacturing, operations, business development and strategy.

US OFS Market and Transaction Outlook

The weight of the energy sector in public markets has halved since 2009 (to just 6% of the S&P 500). Private market activity is also slow and all but the most attractive transactions have stalled due to a combination of low oil prices, market uncertainty, continuing divergence in bid/ask spreads, lack of debt availability and questions over potential exit opportunities.

Short-lived Upturn

By some indicators the North American OFS market has experienced a rapid recovery since the 2014 downturn, particularly in the Permian basin. However, even before the oil price fall last quarter, the shine was starting to come off, pointing to one of the shortest and least profitable upturns in history.

OFS companies are being pushed from all sides. Costs are rising (especially labour) and demand is choppy. New issues such as pipeline capacity and sand logistics are increasingly coming into play.

Institutional & Industrial Fall-off

Publicly-traded OFS stocks are facing historically low earnings multiples, with many institutional investors turning away from the industry. Industrial firms have abandoned the market, becoming a major source of sales instead of purchases. In one recent US transaction in the drilling equipment space, the bank ended up being stuck with the bridging loan due to a lack of appetite in the market.

Smaller Opportunities, Longer Holds

For small to lower middle market funds there remains any number of interesting technology plays or ‘mom and pops’, those with excellent business models and customer reputations in need of professionalisation that PE can put into place. However, the days of large commoditised OFS companies being IPO’d at attractive valuations is unlikely to reappear, leaving large PE funds lacking both entry and exit opportunities.

Even under the best-case scenario, aligning fund maturities with exit opportunities is increasingly difficult in the OFS market. Investors have been forced to hold businesses for upwards of 6 to 8 years in some cases. Recent fundraising rounds for larger OFS-focused PE funds have been below expectations, raising further questions about the sector.

Although the outlook is uncertain, the OFS sector can provide attractive returns in the long-term market, even with prices higher than investors are currently willing to pay. Buy and hold investors who desire to retain businesses for long periods should fill the spaces left behind given the attractive earnings multiples compared to other industries. As ever, there are still opportunities for smart companies and investors.

To discuss current opportunities with the US team, or for more detailed information on the Calash view of the US OFS market, please email america@calash.com

Since completing a degree in Geophysics and a Masters in Oil and Gas Enterprise Management, Project Manager Robert Neves has amassed six years of energy sector analysis and client consultancy experience with Calash.

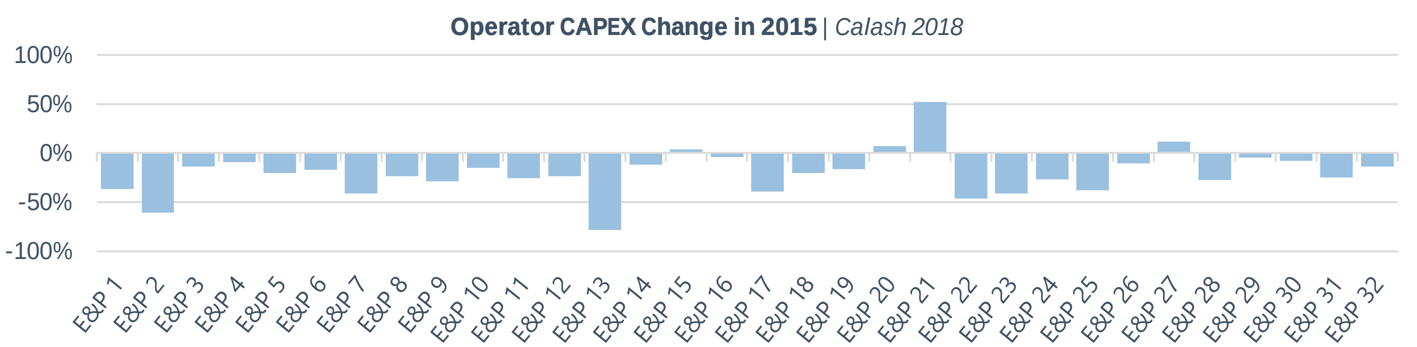
Market Insight – Operator CAPEX Trends

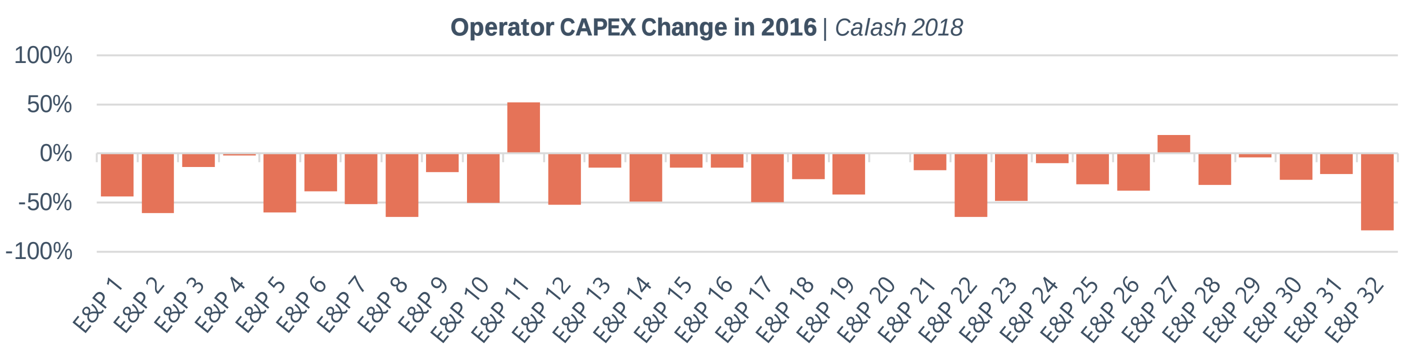
Following the oil price drop in 2014, CAPEX by the world's largest Operators fell sharply in 2015. Then, as the downturn continued through 2016, Operators cut CAPEX even further, with several making reductions of over 40% compared to the previous year. However, the market started showing signs of recovery in 2017, boosting Operator confidence. As a result, there has been a material shift in CAPEX trends with the majority of global Operators increasing expenditure last year.

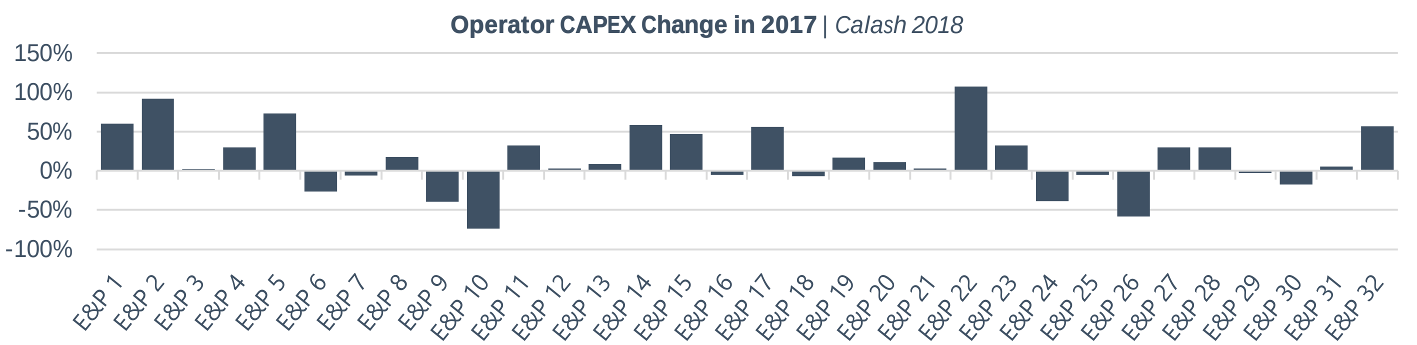
2018 (with the exception of the last few months) has mostly been positive for oil prices and market sentiment. We therefore expect that, once results are released, we will again see a majority of Operators with either flat or increasing CAPEX budgets.

How this trend continues next year will largely depend on how oil prices evolve. With the recent return of $50-$60 per barrel prices, the market sentiment is that CAPEX will continue to increase next year, although the rate of growth may now be slower.

To go into more detail on CAPEX trends, email analysis@calash.com







Jonathan Clarke joined Calash over four years ago and has worked on and supervised dozens of high-profile due diligence exercises, strategic reviews and data modelling projects. Prior to this he worked for several years in both the mining and the offshore Oil & Gas industries.

Market Insight – Global Intervention Activity

Global intervention activity (including work associated with drilling, producing wells, and P&A jobs) is forecast to slowly increase over the next four years according to Calash research.

However, recently falling oil prices have reduced the drilling outlook, impacting overall growth in the intervention market too.

Between 2018 and 2022, we expect onshore interventions to increase at less than 1% CAGR, with offshore interventions growing at under 2% CAGR.

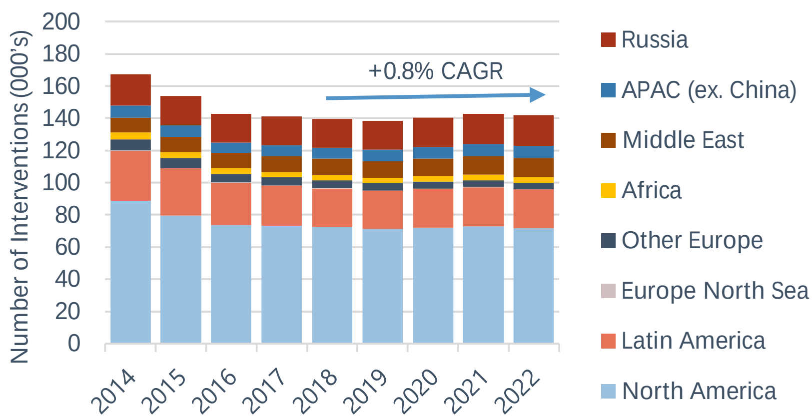
Overall, this means that the market will remain competitive over the next few years, with no significant demand growth for intervention services.

Companies offering intervention tools and downhole equipment therefore cannot expect to sit back and wait for revenue growth from the market alone.

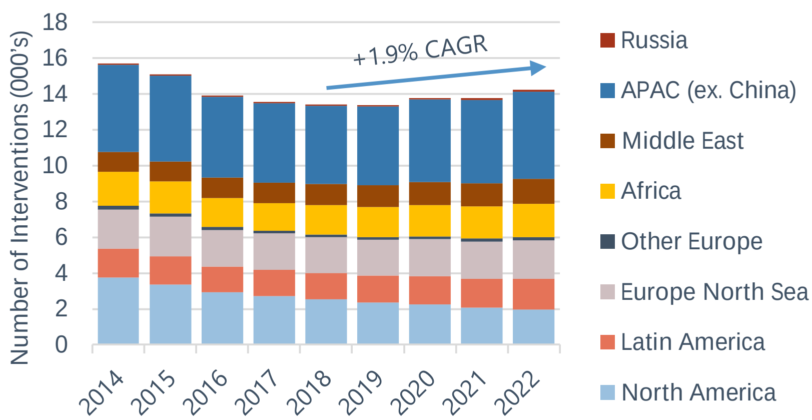
This helps demonstrate why proper strategy and value propositions to the Operators are increasingly required in today's market.

For more detail on intervention trends, email analysis@calash.com

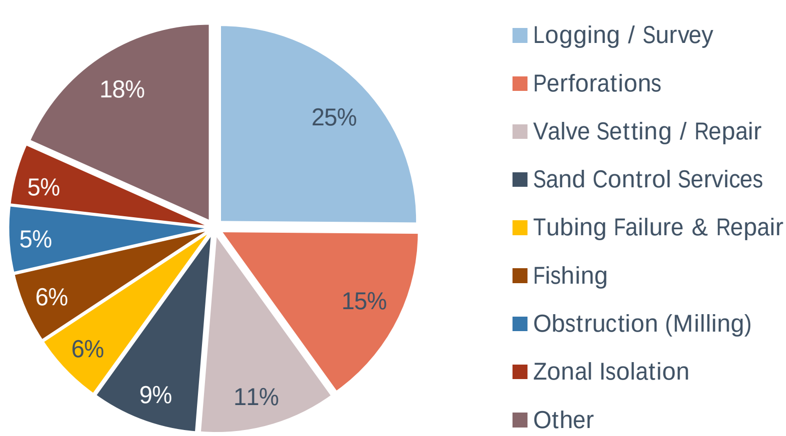
Global Onshore Intervention Activity by Region | *Calash 2019*



Global Offshore Intervention Activity by Region | *Calash 2019*



Split of Global Intervention Activity by Application | *Calash 2019*



Prior to joining Calash Iain gained over 15 years of corporate banking experience handling the funding requirements of a broad range of companies, supporting restructuring, growth and diversification. As a Project Manager he has worked on numerous transactions from modest management buyouts through to multi-million-pound acquisitions.

Guyana – A Future Offshore Market Opportunity

According to estimates by the US Geological Survey, the Guyana-Suriname Basin holds 19.4 billion BOE. This makes it the second most significant underexplored basin in the entire world and the 12th largest of all the oil basins in the world, either explored and unexplored.

In Spring 2017, Exxon CEO Darren Woods estimated that Liza Phase One break-even cost would be $40 per barrel. However, Hess's Tim Chisolm said at the Offshore Technology Conference in May 2018 that break-evens have fallen to $25 per barrel.

Once Exxon's Liza Phases 1 and 2 are producing, Guyana is expected to become the second highest per capita oil producer in the world. With further developments, there's a possibility that Guyana could even become the highest per capita oil producer in the world.

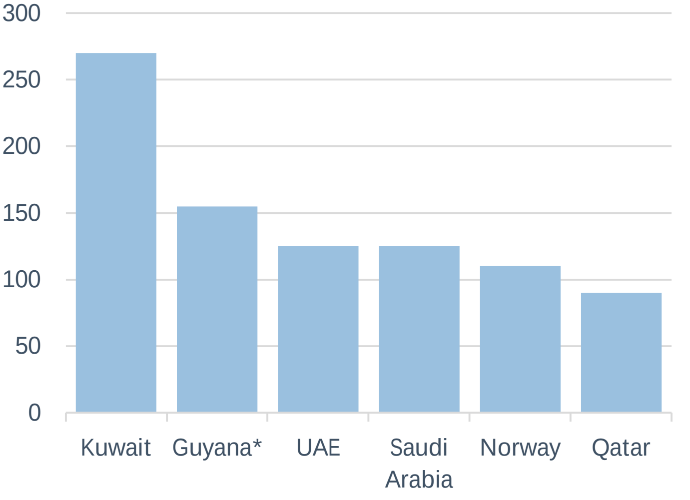
Tullow, Repsol and CGX have all announced that they will begin drilling programs on their respective blocks next year. With two more development phase sanctions expected in 2019, these and other E&P drilling programs should lead to a new round of development and service contracts in the near future.

Supply Chain Opportunities

The country is at a very early stage in its oil and gas journey and currently lacks the support infrastructure that is necessary as the industry evolves. The deep water developments will be produced via FPSOs, requiring a diverse and robust supply chain to support them. Companies servicing the North Sea and US GoM have much to offer and Guyana is embracing external interest as it moves towards first oil in 2020.

Calash has worked in the Guyana and our network can provide guidance to companies looking to enter or already operating in the country. For more information please email analysis@calash.com

Barrels of Oil Production per Capita Comparison |
Region3 2018



* only Liza Phase 1+2

As Calash Research Manager, John Corbett has built his analyst skills in database design, financial modelling and market analysis on the back of a Master's in Global Energy and Climate Policy from the University of London.

CCS & Energy Storage on the Rise

Investment in Energy Storage projects picked up significantly last year, with growth in Carbon Capture & Storage [CCS] project announcements helping to support CO_2 reduction targets.

Renewable projects have soared since 2013, accounting for almost 70% of all energy sector project announcements in 2018. In contrast, conventional project announcements have remained relatively flat, fluctuating between $100 and $150 billion per year.

At COP24 last year, 196 countries met in Poland to approve a rulebook to implement the 2015 Paris agreement. To meet these commitments more investment in complementary energy systems is required, generating increasing opportunities for energy storage investors.

Rise of CCS

CCS allows existing conventional plants to be modified to reduce their environmental impact and can significantly delay their decommissioning.

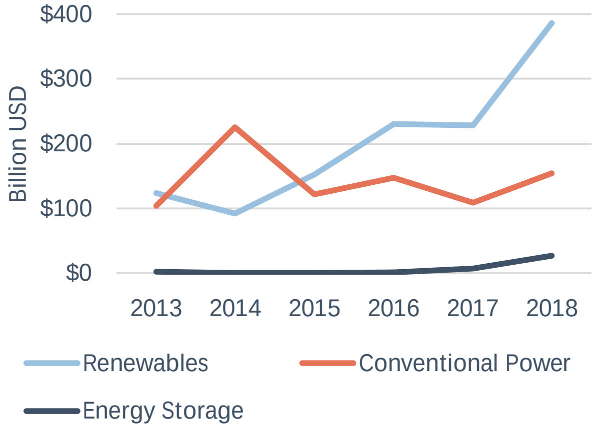
Over 90% of CCS project announcements since 2015 have originated in the UK and Ireland, including the $1.5 billion Teesside project that will generate power from natural gas and inject waste CO_2 into the Southern North Sea.

Late Starter: Energy Storage

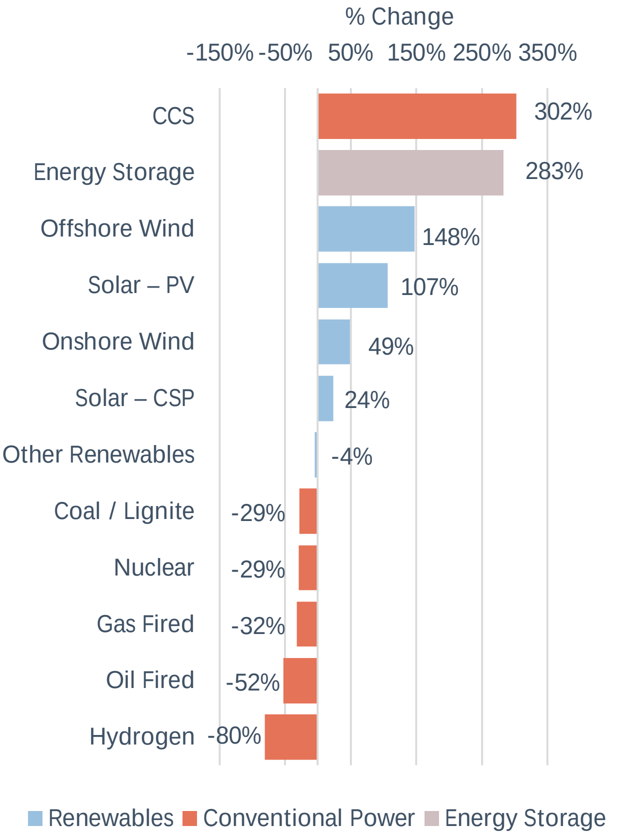
Energy storage project announcements also increased sharply in 2018. As renewable energy accounts for a growing share of the energy mix, storage projects are crucial to ensure that wind and solar projects continue to deliver power during low wind or light conditions. At present, large scale projects are limited to pumped storage but, as battery technology becomes more viable, we expect investment in energy storage to grow.

To discuss the latest opportunities in renewables, or for more detailed information on specific investment opportunities, please email carbonfree@calash.com

Global Energy Project Announcements by Sector, 2013-2018 | *Calash 2018*



% Change in 2018 Energy Sector Project Announcements Compared to Five Year Average by Total CAPEX | *Calash 2018*



Increased Focus on Strategy

In 2018 Calash worked with businesses operating in every continent across the energy sector and into adjacent markets such as mining, aerospace and utilities. We observed a noticeable growth in strategic and general advisory work as businesses began to restructure, refine their core markets and grow into new ones. This strategic refocus reflects the current macro market conditions, particularly in the Oil & Gas sector as overall value fell and investors demanded more tangible reassurance of future direction and prospects.

Strategy and Restructuring

Deep-water Divestment

Strategic business review in support of a firm seeking to divest a non-core division in the deep-water offshore equipment manufacturing space.

Mining

Business review on behalf of a PE investor, focused on technology, contracts and the metals and minerals market for an Australian mining services business.

Market Entry Review

Strategic planning support and international market entry reports on behalf of a leading subsea services business.

Vessel Operator Review

Strategic business review of an international vessel operator on behalf of the lender.

Consultancy and Customer Referencing

Industrial Supply Chain Analysis

Evaluation of supply chain partners in the industrials and civil engineering markets on behalf of a trade client.

NDT Technology Assessment

Customer referencing exercise on behalf of a PE investor during the potential acquisition of an NDT services provider.

Market Analytics and Planning

International Expansion

Market opportunity, competition and entry strategy review for a corporate seeking board approval for international expansion into the US onshore market.

Interactive Market Dashboard

Developing interactive dashboards to accelerate sales team activity and senior strategic planning in the downhole tool market.

Specialist Products Entry

Facilitating a series of engagements for a global client seeking to understand the market and product applications for specialist plastic products.

Due Diligence and Transactional Support

Downstream Services

Full CDD for a PE investor during the proposed acquisition of an international downstream and petrochemical services company.

Onshore Equipment

CDD exercise including post transaction strategic support for a investor during acquisition of an equipment manufacturer in the US onshore pumping market.

IP Evaluation

Detailed review of drilling technology and associated IP as part of a legal process.

Merlyn Gregory, Candour Managing Director, has many years of experience providing clients with origination services, strategic support and due diligence. With Candour, she has built an extensive expert network offering invaluable insights and practical support to some of the world's most successful operators, private equity and strategic consulting firms.

Preview: Candour Market Sentiment Survey

At Calash's sister company Candour Energy we connect clients with the experts they need to generate market and product insights and identify and build specialist operational knowledge across the supply chain. Over the last few years, Candour has grown its specialist network significantly, to the point that we are now launching a regular Market Sentiment Survey based on a sizeable sample of international energy experts.

Well Intervention & Field Development Set to Rise Fastest?

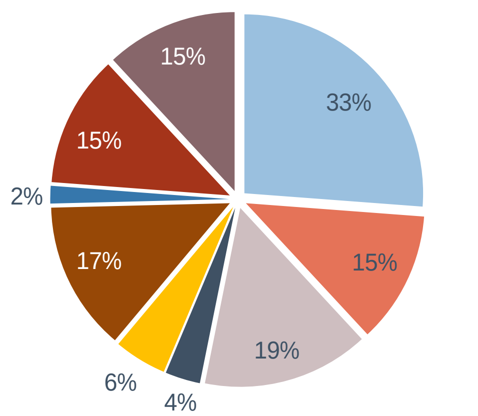
Preliminary results from the first survey reveal that the majority of respondents believe that market activity across all sectors is likely to increase in 2019, but the outlook is most confident for the Well Intervention and Field Development segments. This tallies with the other reports Calash has been compiling.

The full survey, which also includes a Regional Outlook, will be published soon. As it is repeated, we will benchmark results versus previous quarters to give a clear and regular comparative indicator of how sentiment in the field is shifting. Where the opportunity presents itself, we will put results in the context of macro factors and we can easily revisit any interesting outcomes with particular network respondents to elucidate them. We hope that the survey will provide a valuable secondary indicator for analysts and investors.

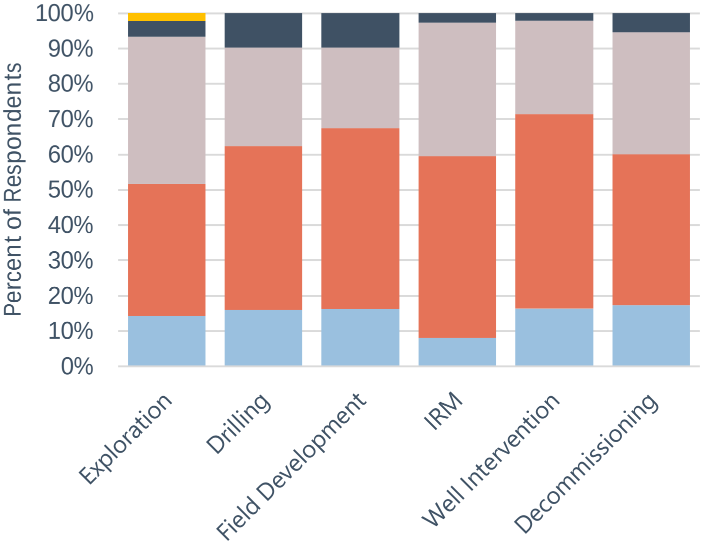
To subscribe to the Candour Market Sentiment Survey, email survey@candour.com

To find out more about our services or join our expert network, email network@candour.com

What is your Current Primary Region of Operations? | *Candour 2018*



How Do You Foresee Activity in your Region Changing in the Following Areas in the Coming 6-12 Months? | *Candour 2018*



CANDOUR ENERGY

Calash offers a broad range of consultancy support to investors and operators; independent market reviews and referencing, benchmarking, commercial turnarounds, strategic development, technical and product assessments and environmental reviews. Areas of expertise include Oil & Gas (upstream, midstream, downstream) Renewables and Mining; covering development, operations, project management, engineering, IRM, supply chain, manufacturing, and financing.

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