



# GLOBAL OIL & GAS SECTOR



Groundwork Intel  
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# THE DEMAND DISRUPTION AND A SUPPLY GLUT HAS GENERATED AN UNPRECEDENTED CRISIS FOR THE INDUSTRY

The energy industry had been grappling with a range of issues such as energy transition, increasingly volatile oil prices, government regulations, disruptive technologies, intensified global competition, before the pandemic hit it hard

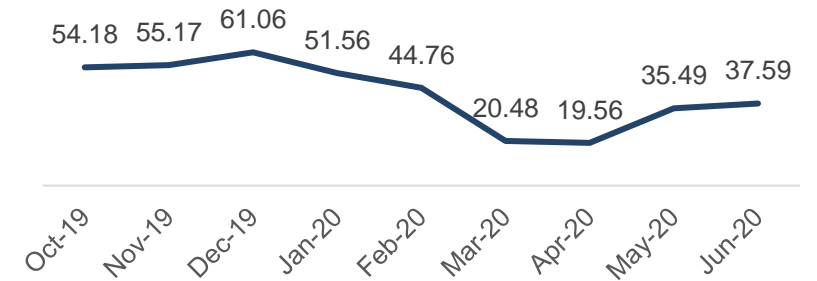
## DEMAND FORECAST

- EIA forecasts that demand for global petroleum and liquid fuels will average 83.8 million barrels per day (b/d) in the second quarter of 2020, 16.6 million b/d lower than at the same time last year.
- As stay-at-home orders are eased, EIA expects liquid fuels consumption will rise to an average of 94.9 million b/d in the third quarter (down 6.7 million b/d year over year).
- EIA forecasts that consumption of petroleum and liquid fuels globally will average 92.5 million b/d for all of 2020, down 8.3 million b/d from 2019, before increasing by 7.2 million b/d in 2021.

## SUPPLY FORECAST

- EIA expects the supply of liquid fuels globally will average 92.6 million b/d in the second quarter of 2020, down 7.9 million b/d year over year.
- The declines reflect voluntary supply cuts by OPEC+ and reductions in drilling activity in the United States because of low oil prices.

Crude Oil WTI Futures



**Crude prices rose in June to the highest in three months as demand began to recover and global supply fell sharply.**

- EIA expects monthly Brent prices will average \$37/b during the second half of 2020 and rise to an average of \$48/b in 2021.
- The forecast of rising crude oil prices reflects expected declines in global oil inventories during the second half of 2020 and through 2021.
- EIA expects high inventory levels and spare crude oil production capacity will limit upward price pressures in the coming months, but as inventories decline into 2021, those upward price pressures will increase.



**ENERGY COMPANIES ARE  
ADOPTING VARIOUS  
SHORT TERM TO LONGER  
TERM MEASURES TO  
COMBAT THE CRISIS**



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# ADOPTION OF VARIOUS SHORT-TERM BUSINESS CONTINUITY MEASURES

- In order to ensure short-term business continuity, companies adopted various workforce measures including:
  - Building flexible work arrangements, where applicable, to minimize close worker proximity.
  - Application of wearable technology, digitised remote viewing and remote work planning
  - Following social distancing norms and sending non-essential workers back home.
  - Split workers into teams and have them work different shifts to restrict contact between workers to a smaller group.

*At major operational sites, such as its refineries, BP has implemented a new 'team-based' shift model, where contact between two teams is restricted.*

*BP, Exxon Mobil, Kinder Morgan, Motiva Enterprises and Royal Dutch Shell told most office staff to work from home*

*Shell asked salaried staff at its Louisiana refineries to begin shadowing hourly plant operators to prepare managers to run units if necessary*

*Exxon will allow only trained operators into control rooms at its Baytown plant, and they must remain at least six feet apart from one another*

*Marathon Petroleum launched "business-continuity plans to accommodate staffing needs in the event of illness-related absenteeism*



# RESTRUCTURING COSTS AND BUILDING SUPPLY CHAIN RESILIENCE

- Companies are restructuring costs to conserve cash and optimize working capital:

- Oil giants announced billions of dollars in spending cuts as they look to provide a buffer for themselves against ongoing oil market turmoil.

Major Cost Cutting Measures Adopted by Oil & Gas Firms

Oil & Gas Majors	Cost Cutting Measures Adopted in 2020
BP	<i>Flexibility' to cut 20% from 2019 capex of \$15.3bn</i>
Shell	<i>20% capex cut to \$20bn or below. Up to \$4 bil of opex cuts over 12 months.</i>
Total	<i>20% organic capex cut to less than \$15 billion. \$500 mil of extra opex cuts</i>
Eni	<i>Considering 'strong' reduction in capex, opex</i>
Saudi Aramco	<i>Capex guidance cut 25-29% to \$25-30 bil</i>
Aker BP	<i>20% capex cut compared to previous guidance of \$1.5bn</i>

- Companies are focussing on building supply chain resilience:

- Some of the steps undertaken by the energy giants include, rethinking a decentralized global supply chains, improved supply-chain resilience and collaborative supplier-relationship management, drive next-level supply-chain cost efficiencies.



# ACCELERATING ADOPTION OF DIGITAL CAPABILITIES

- Traditionally, Oil and Gas companies have been slower than organizations in other industries to adopt the latest wave of digital transformation – missing an integrated digital strategy, important capabilities, and concrete action plans.
- The pandemic has prompted offshore oil and gas businesses to ask how they can extract greater margins and use technological differentiation to create more stable, less cyclical businesses from their exposure to exploration and production.
- More and more companies are looking hard at deployment of artificial intelligence, analytics, robotics, and blockchain to increase efficiency, productivity, reliability, and predictability of operations.
  - Royal Dutch Shell is collaborating with Udacity to digitally train its workers in artificial intelligence. This began long before the coronavirus pandemic and the company continues to use this training method.
  - Other oil and gas companies, including ExxonMobil, Chevron and BP, have also leveraged AI to help them improve operations and reduce costs.
- Technologies such as Digital Twins offer the opportunity to oil and gas companies to use the data and information they have at their fingertips to reduce operating expenses, accelerate production and make better – and faster - decisions.
  - Eni is another eager adopter of digital twins. The company is investing heavily in the use of digital tools and sophisticated analytics to complement the technical experience of its engineers.
  - At Equinor’s Johan Sverdrup field, digital twin technology is helping to optimise operations at a field that will account for up to 25% of Norway’s total offshore production.

According to a 2019 study by Rystad Energy, E&P upstream budgets can save up to \$100 billion through automation and digitalization.

IT and market research institute Gartner predicts that half of all major industrial companies will be using digital twins by 2021, potentially increasing their operational effectiveness by 10%.





# WORKFORCE TRANSFORMATION

- The energy sector is already in the grips of a talent crisis.
  - Talent shortage: Attracting younger people, into what they see as a sunset industry. Beyond geoscientists, beyond traditional engineers, the sector needs to attract the data scientists, the digital scientists, those who are leading the digital revolution and to be frank they are very, very mobile.
  - A demographic shift that will be ushered in over the next decade as a large proportion of the sector's aging workforce will retire.
- The pandemic has exacerbated the already existing talent challenges. In the current scenario, it is important more than ever to determine what the future of work will look like and align talent strategies for the new environment.
- Creating an agile workforce by embedding agile ways of working such as flattening hierarchies, reducing bureaucracy has become crucial.
- Making the sector more attractive for the younger hires: by automating lots of the dirty, on-the-ground work that the industry is known for, it can help create a less dangerous, less environmentally impactful and more attractive workplace.
  - Technology will play a huge role in transforming the industry's workforce into one that is highly skilled and educated.
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Oil & gas operators will experience an estimated deficit of 10,000 to 40,000 petrochemical professionals by 2025, according to an Accenture study.

A survey by EY, the global assurance and advisory services firm, shows that millennials and Gen Z view oil and gas jobs as blue-collar, dangerous, and physically demanding.





# QUARTERLY PERFORMANCE UPDATE



# TRACKING ENERGY COMPANIES' PERFORMANCE

Latest Quarter

CHEVRON



EXXON MOBIL



PETROCHINA



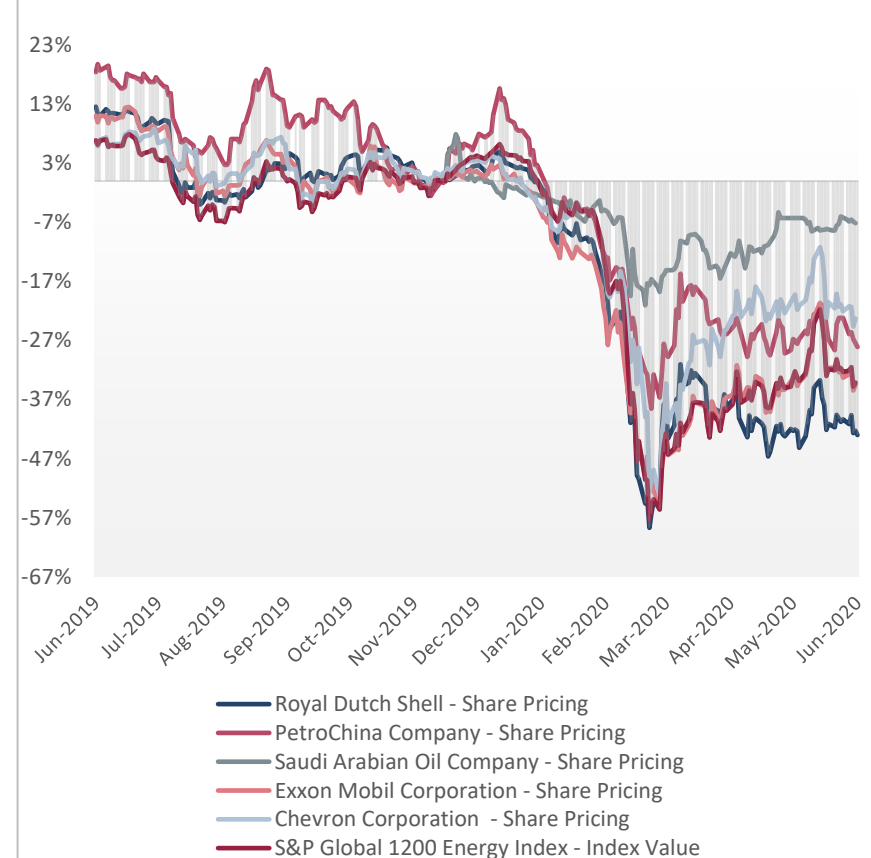
ROYAL DUTCH SHELL



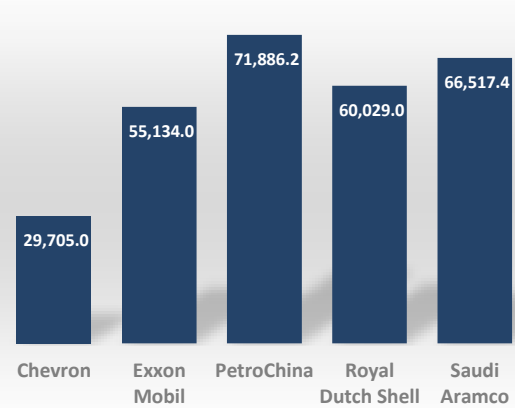
SAUDI ARAMCO



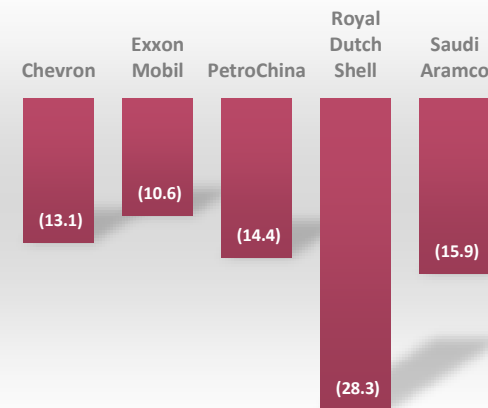
Index and Share Price Movement over the last one year



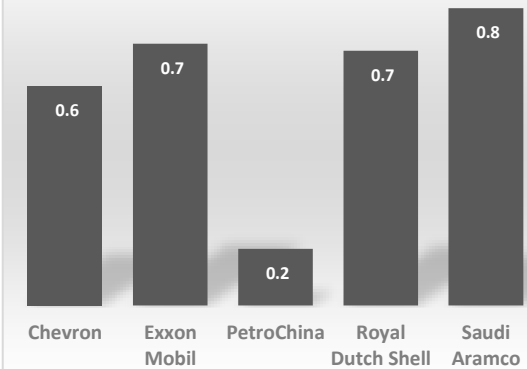
Revenue (USD mn)



Fall in Revenue (1 Yr % - Latest Qtr.)



Employee Productivity (Revenue/Employee – USD mn)



	CHEVRON	EXXON MOBIL	PETROCHINA	ROYAL DUTCH SHELL	SAUDI ARAMCO
EBITDA MARGIN %	22.9	8.7	11.3	13.3	56.5
NET MARGIN %	12.1	(1.1)	(3.2)	(0.4)	26.4
SG&A MARGIN %	20.4	5.2	9.3	3.9	2.5
ASSETS (USD mn)	2,36,677.0	3,55,804.0	3,85,064.7	3,93,961.0	391,704.2
LIABILITIES (USD mn)	91,763.0	1,67,061.0	1,83,362.3	2,10,582.0	1,04,867.4
DEBT/EQUITY %	22.3	31.6	49.3	51.8	17.2



Thank You!



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