



Society Of Petroleum Engineers
University of Ibadan Chapter

THE ACT

ENERGY REVIEW

HISTORY OF SUBSIDY REMOVAL IN NIGERIA
AN OVERVIEW OF THE NIGERIAN OIL INDUSTRY

THE FUTURE OF THE ENERGY INDUSTRY
EMERGING MARKETS, ESG INVESTMENTS

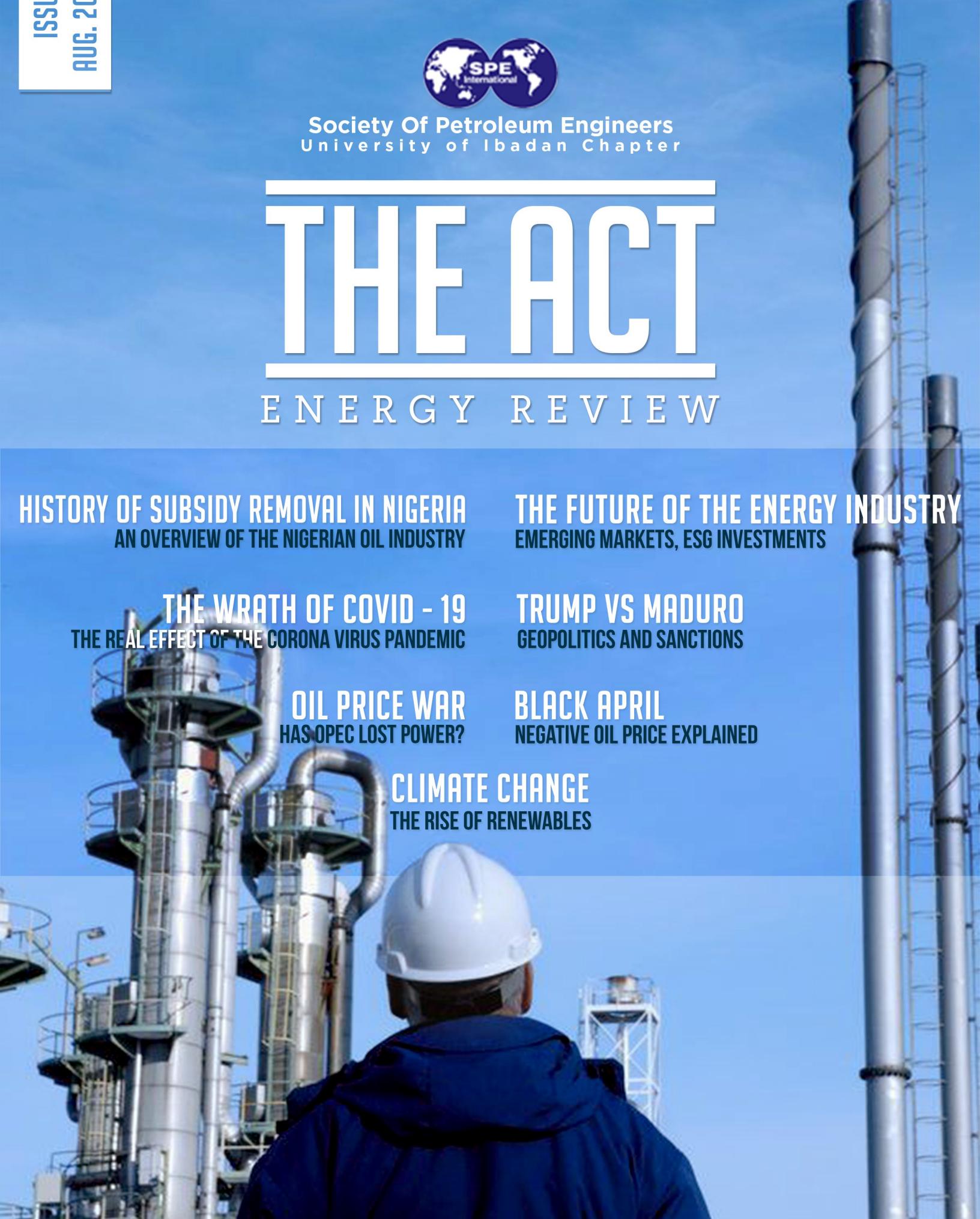
THE WRATH OF COVID - 19
THE REAL EFFECT OF THE CORONA VIRUS PANDEMIC

TRUMP VS MADURO
GEOPOLITICS AND SANCTIONS

OIL PRICE WAR
HAS OPEC LOST POWER?

BLACK APRIL
NEGATIVE OIL PRICE EXPLAINED

CLIMATE CHANGE
THE RISE OF RENEWABLES



THE ACT

ENERGY REVIEW



University of Ibadan



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FOREWORD

By the President, Society of Petroleum Engineers,
University of Ibadan Chapter

I am delighted to introduce ‘THE ACT’, an energy review for students interested in the Energy Industry, such a magazine is long overdue. The Energy Review consist of articles written by members of the chapter where issues that happened over the course of the year were addressed, the idea for the energy review came as a result of us trying to reduce the knowledge gap between students who are really interested in energy related issues and the real life issues happening in the energy industry.

I personally believe everyone should be concerned about things related to energy regardless of field because we cannot do without it. Energy revolves around you and I, starting from the electricity in our homes which we all depend on to the transportation sector which keeps growing, not to talk of the numerous industries that are striving for energy efficiency so as to reduce costs. So regardless of your field, you can find solace reading the energy review as we have given it a simplistic touch.

In this energy review we addressed issues like ‘Black April’, otherwise known as the day oil fell below zero, the energy transition that everyone keeps talking about and issues relating to our country Nigeria. We also backed up our articles with charts we personally created referencing BP STATISTICAL REVIEW 2020.

Trust me, it is a good read and it is definitely worth your time. We are really proud of the work we have put into this and I want to personally thank all our writers, editors, graphic designers and data analyst for the time they have given to the completion of this project. This is the first in the series we plan on continuing so we hope you enjoy it.

All right, what are you waiting for, let us get right into it!!!

**Nwosu Paul
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2020 IN REVIEW



INTRODUCTION

The Review covers events that have occurred over the past 6 months (January–July) 2020 and the articles has you read each are not arranged in any order of occurrence.

The first 6 months of the year 2020 have been a very active one for the oil and gas industry. The industry experienced its biggest threat in over 50 years, an oil price war that came at a wrong time and an oil price crash that will go down in the history books.

Growth in the energy markets started slowing down in 2019 in line with weaker economic growth, China was the exception, with its energy consumption accelerating in 2019. As a result, China dominated the expansion in global energy markets – contributing the largest increment to demand each individual source of energy other than natural gas, where it was only narrowly surpassed by the US. Then came the “CoronaVirus” pandemic that hit the world by surprise leading to a worldwide lockdown where countries like China and the US, the highest consumers of energy were the first to be heavily affected, this, of course, affected the dynamics of energy demand and supply, as the pandemic persisted, the world went on a global lockdown and we saw industrial activities and transportation reduced to their lowest levels in years. As if this was not enough, OPEC and its allies decided to start a price war that lasted for almost a month. Alongside all these was the increasing rise in talks of an “energy transition and reduction of global carbon footprint” where investors and activists were putting the oil and gas industry in the spotlight asking them to set definite targets on how they plan to make the switch to a greener form of energy. The combination of all these events had a compounding effect on the oil and gas industry.

We have put together 6 amazing articles summarizing major events that transpired within the past 6 months, we hope you enjoin it while you read and also share with your colleagues.

HAS OPEC LOST POWER?

A Recursion of Failing Strategies

The Organization of Petroleum Exporting Countries otherwise known as OPEC over the years have tried to take down the US Shale industry. Have they been successful? well, success goes both ways.

In this article we will look at the biggest threats OPEC faces, how OPEC+ strengthens the power of OPEC as a cartel, and give a brief history of oil price wars instigated by OPEC de facto leader Saudi Arabia.

We will also dive into the numbers and show trends over the past 50 years of how OPEC has lost market shares due to decisions made by the cartel. Also, give explanations as to why reserves and production are important for gaining market shares.

By Nwosu Paul



A little bit of History

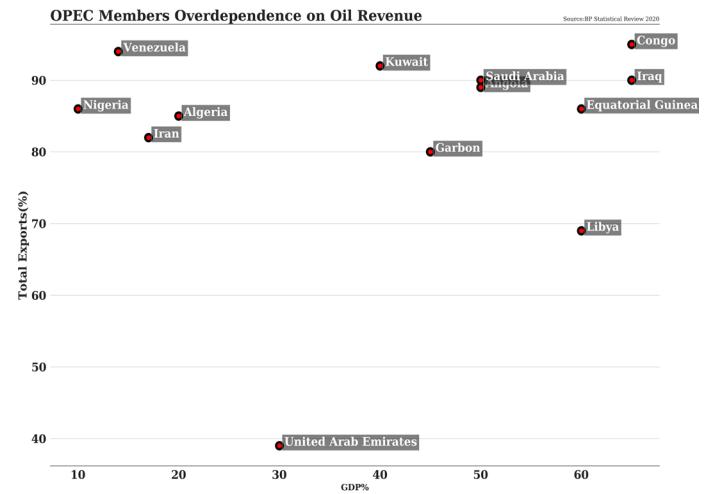
Organization of Petroleum Exporting Countries otherwise known as OPEC was founded in 1960 by 5 countries; Saudi Arabia, Iran, Iraq, Venezuela, Kuwait. The aim of the organization is majorly to stabilize the oil market and ensure the enforcement of policies that benefit it, members. These policies sometimes include production cut in order to reduce the amount of oil available on the market to induce artificial scarcity, thereby increase the oil price

OPEC RISE TO POWER

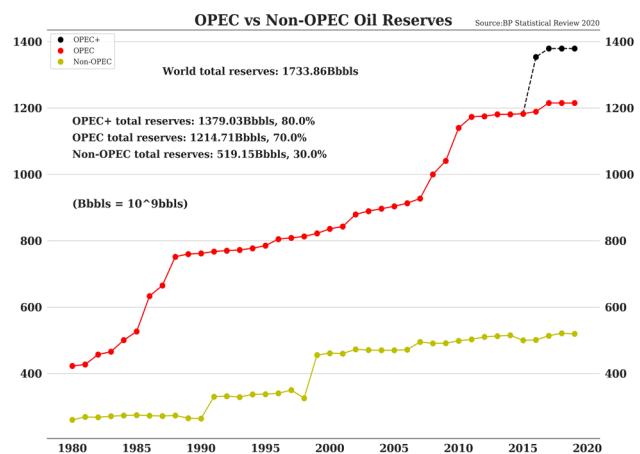
It all started with the [oil shock in 1973](#) which gave OPEC the momentum to become a global mover. That year, in response to US support for Israel during the Yom Kippur War, OPEC stopped oil supplies to the United States. This was done by a reduction in their cumulative oil production. The crisis had far-reaching effects on oil prices.

As stated by previous articles, the oil embargo - first of its kind done by OPEC shifted the structure of the market from a buyer's to a seller's market, the oil market was earlier controlled by the [seven sisters](#) that can now be traced to Big oil companies such: Chevron, Total, Shell, BP, and ExxonMobil.

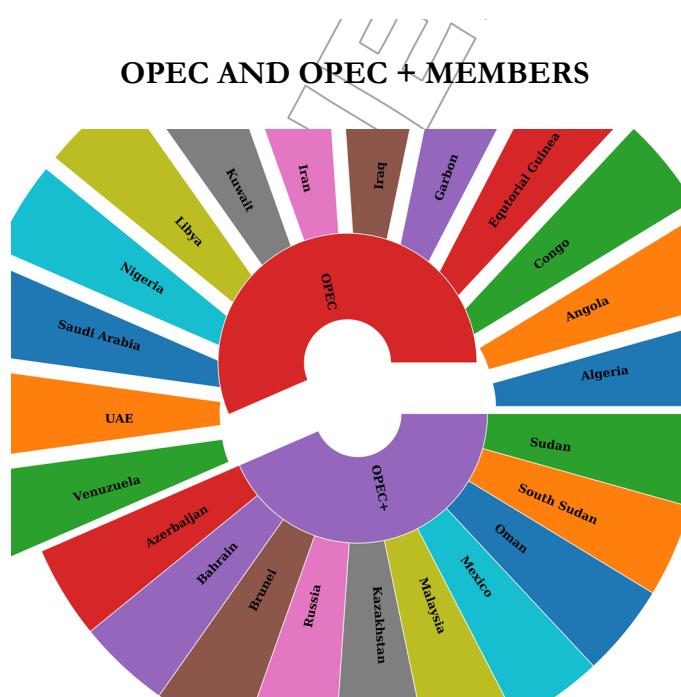
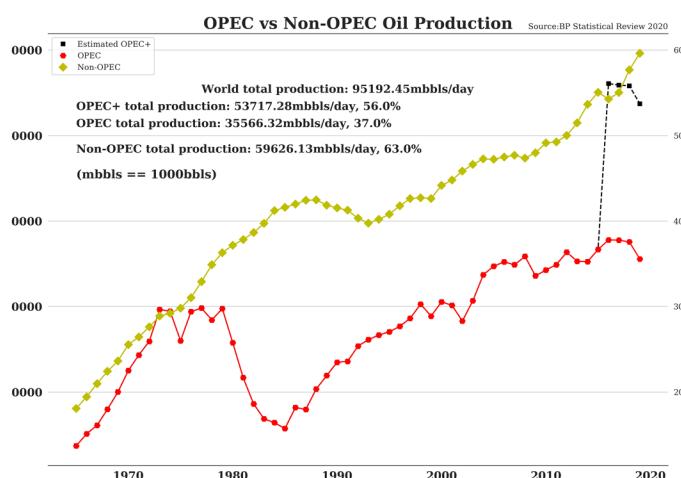
In the last four decades, OPEC has grown to be one of the largest forces influencing the oil price worldwide. OPEC uses a price over volume strategy whereby they limit the amount of oil each individual member can produce so as to keep the price of oil high. Over the years, OPEC has lost members and gained some new members, the number of OPEC members currently stands at 13. One important thing to take note of is that OPEC members share one thing in common, 'they are heavily dependent on the revenue generated from oil production' and most of a large percentage of their exports come from oil.



With the advent of smaller oil-producing companies and the US shale revolution, OPEC's influence on the oil market started reducing over time. They have sought to use their price over volume strategy to maintain oil prices but this has not been effective in keeping the oil prices higher because of loss of market shares. The loss of market shares is the effect of ramping down production in the presence of other competitors that are ready to fill up that space. Although, In terms of Oil Reserves, OPEC still holds the highest shares and are yet to be dominated in that area. OPEC controls about 80% of total oil reserves, which is a lot considering the amount left to share amongst Non-OPEC members.

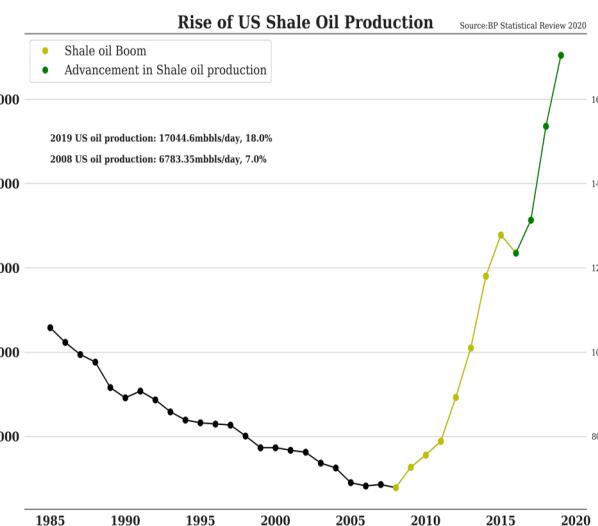


The rise of the US shale industry has been one of the greatest threats OPEC has ever faced as this led to the US taking the number one spot as the highest oil producer ahead of other OPEC members like Saudi Arabia, Iran, Iraq, and Kuwait. This has decreased the percentage of oil production controlled by OPEC, this led to an unexpected alliance between OPEC, Russia, and some other oil-producing countries, and this alliance is what is known as OPEC+. This alliance increased OPEC market shares from about 40% of oil production to above 50% and gave OPEC a fighting chance against the US shale Industry allowing them to still have influence over oil prices.



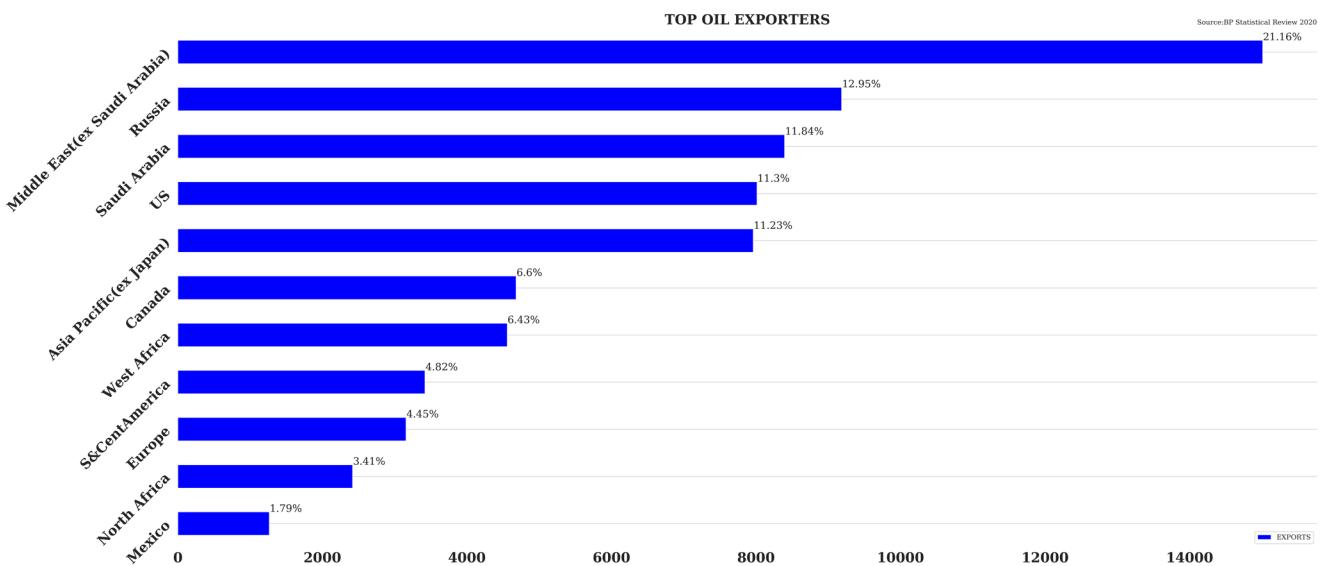
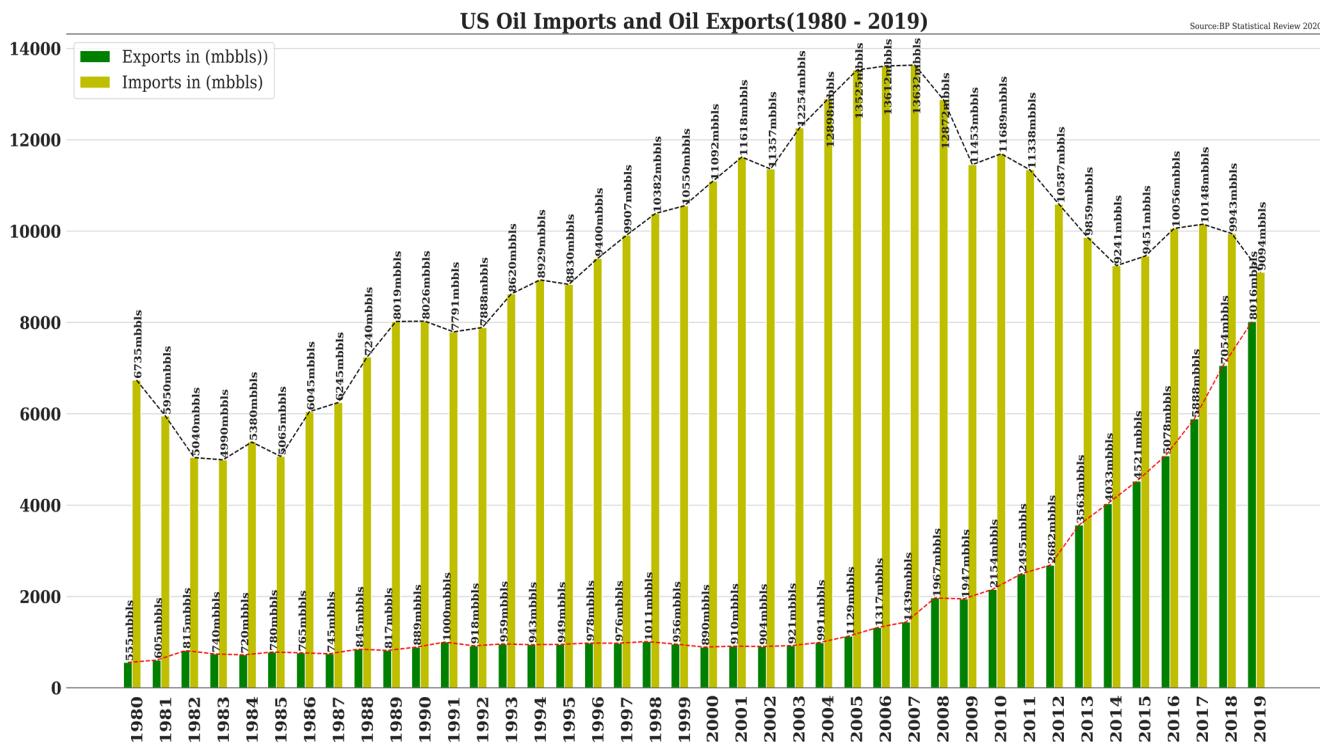
The Rise of Shale

One thing the US realized after the 1973 oil embargo placed by OPEC members was their dependence on oil imports from OPEC members like Saudi Arabia and Venezuela. Records show that the embargo led to a spike in the oil price which caused an increase in gasoline pump prices, this affected the US Economy and ended up leading to a recession. After overcoming this event, the US strived to attain energy independence but this did not come easy as they are one of the largest consumers of oil. In 2008, a new method for drilling called fracking was developed which constituted two techniques; horizontal drilling and hydraulic fracturing to tap into impermeable shale rock and extract the hydrocarbons. Shale drilling started with drilling for gas but later transitioned into the oil industry, this led to an oil boom similar to when oil was first discovered in Titusville and just like any new business venture, investors started trooping in, dumping their money in the shale industry. The US suddenly experienced a significant spike in production and the impact was suddenly felt around the World, this was the birth of the US Shale Revolution and the beginning of the so-called energy independence the United States had strived to attain.



The development of the US shale oil was not welcomed by OPEC and countries like Russia who saw the rise in US production as a threat to their own market shares. The US has always been a top consumer of oil and unlike previous times when they relied on oil from Saudi Arabia and other parts of

the world to feed their rapid growth and development, they now had an edge and their influence gradually increased to be the highest oil producer in 2014. The US producing their oil caused a lot of disruption, one of which turned them from a net importer to a net exporter of oil.



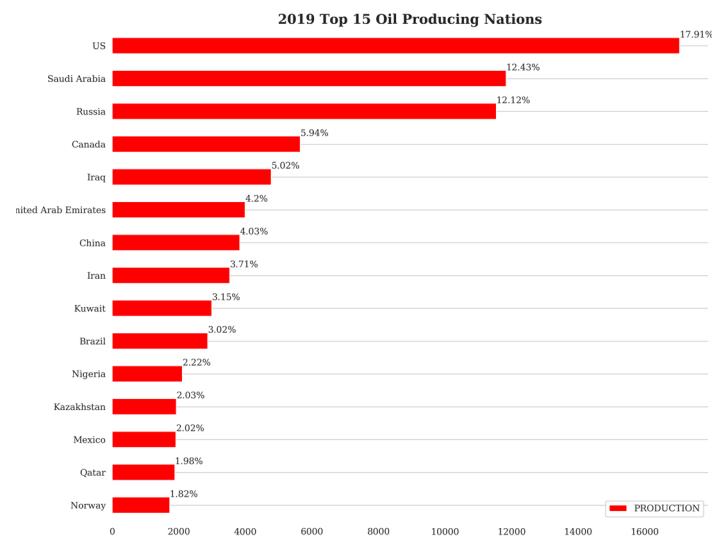
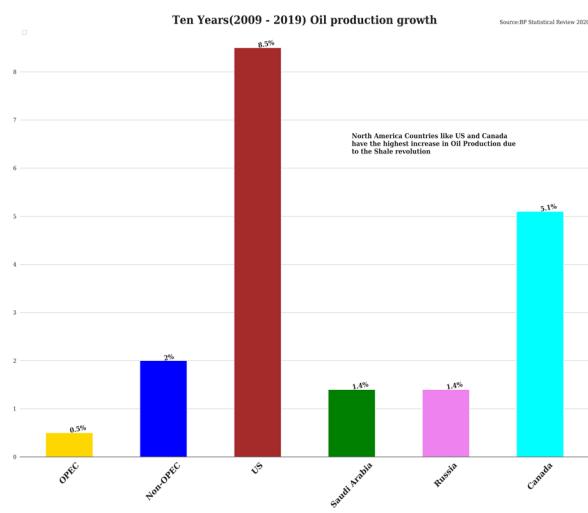
The Battle for Dominance

OPEC was not just going to sit back and allow the Shale Industry take over the Oil industry with increased production, they needed to act fast so as to maintain their market shares and dampen the effect of US shale. Between 2014 – 2016, Saudi Arabia, the highest oil-producing nation before the US and also OPEC de facto leader instigated their first price war. Saudi Arabia's objective was to halt the development of the US shale sector by pushing oil prices so low through overproduction. The growth of the shale industry came at a rapid speed, but it comes at a price; it is more expensive to drill compared to conventional oil. It was widely assumed that the breakeven price across the US shale sector was \$70 per barrel and that this figure was largely inflexible.

The Saudis thought and were extremely confident of securing a victory within a matter of months, they had the perception that their strategy to flood the oil market with excess oil will lead to falling in oil price thereby disabling the US shale industry permanently since they require a higher oil price to break-even.

Unfortunately, Saudi Arabia had misjudged the ability of the US shale sector to reorganize and restructure into a leaner and lower-cost flexible industry. Some companies within the US shale sector got affected and filed for chapter 11 bankruptcy. This allowed them to sell off some assets and reorganize the structure of the company. Some other companies that have operations in the core areas of the Permian and Bakken were able to breakeven at price points around \$30 per barrel. After two years, Saudi Arabia caved in, having accumulated a huge amount of debt. This price war instigated by Saudi and members of OPEC created the resilience of the US shale sector and made them adapt to low oil prices.

One thing we realized from the oil price war was that \$25 – 30 per barrel of WTI is enough to bring some US shale oil production back online and even if prices are below that level, it does not matter to the long term survivability of the US shale sector as the key players are able to shut down wells instantly as and when needed and to start them up again within a week as demand requires. At the end of the day, it came down to who could tolerate low oil prices for the longest period of time and the US strived as they are still the World's largest oil producer.



A Chance for Collaboration

One might think that with the US being the highest producing nation in the world, this would motivate them to work with OPEC and OPEC+ to keep oil prices high since they all have a significant percentage of market shares. This is far from it; in a rising oil price environment, the US does not tolerate prices above \$70 per barrel of Brent. In 2019, when the oil price rose consistently around \$70 per barrel, US President Donald Trump tweeted, referring Saudi crown prince about how he does not like the way oil prices are going high up. In as much as the US are now top producers, they still consume a lot of barrels per day meaning they still have to import oil, and also let us not forget that there are [different grades of oil](#) (benchmarks) produced by different countries all having varying costs. It is estimated that every \$10 per barrel change in the price of crude oil results in a 25 – 30 cent change in the price of a gallon of gasoline, and for every 1 cent that the average price per gallon of gasoline rises, more than \$1 billion per year in consumer spending is lost. This is a loss to the US and if not controlled can lead to inflation as seen in cases like the 1973 oil embargo.

Also another point to take note of is the structure of governance between OPEC countries and the US. OPEC members run an autocratic form of government and therefore have control over oil resources within their country with the help of their national oil company. Take for example, in Nigeria, the NNPC controls almost all oil reserves in the nation and also they are in charge of bidding rounds for oil contracts, also in Saudi Arabia, they have Saudi Aramco, the national oil company for the country, the same goes for Russia, where they have ROSNEFT. This gives OPEC members the ability to impose production quotas on marginal oil companies and even International oil companies carrying out activities within the country.

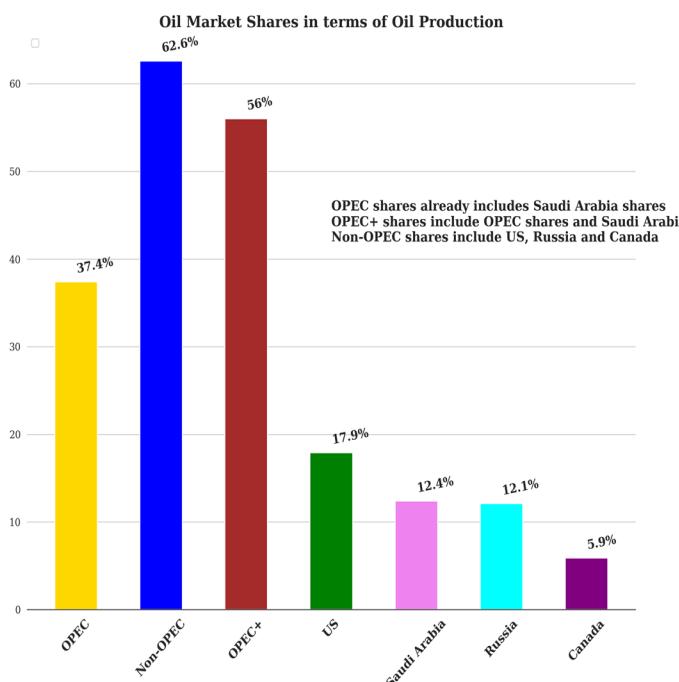
Whereas in the US, it is a free and competitive market and the government has no control over who produces more than who, in fact in the US, trying to influence oil price by increasing or decreasing production is found illegal and goes against [Antitrust laws](#).

With all these differences, the US and OPEC coming together to work as a functional group are most likely not going to work.

Current times

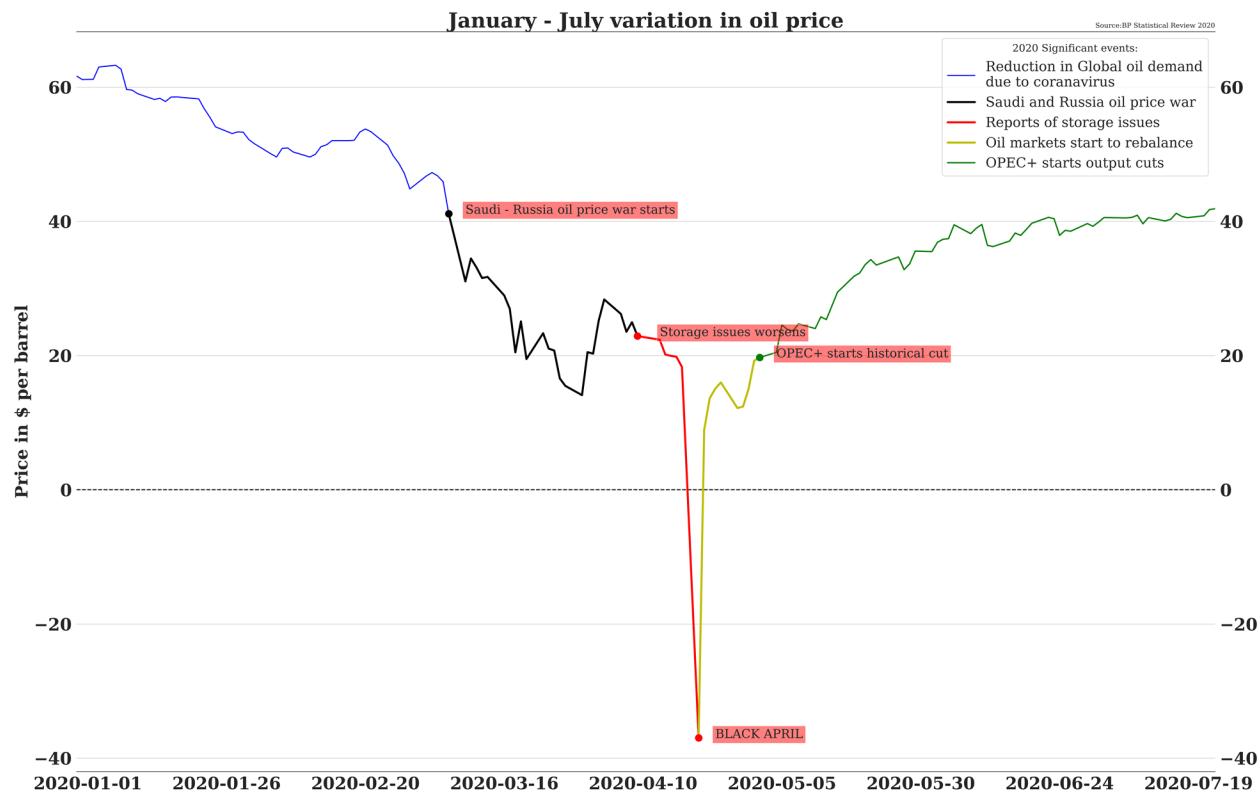
Another price war was instigated by [Saudi Arabia and Russia in March](#), unfortunately, this came at a time when the coronavirus pandemic had already started disrupting oil demand. It all started when Saudi Arabia demanded output cuts from members in order to offset the impacts of the coronavirus. Russia, the leader of the OPEC+ members refused to participate and after Russia walked away from the table, Saudi Arabia took the surprising route of increasing oil output, causing the largest one day drop in prices in nearly three decades.

From the beginning, the question arose as to who would cave in first: Saudi Arabia, Russia, or US production that has gained market share but requires higher oil prices to stay in the business.



Some reports say that Saudi Crown Prince Muhammad bin Salman's decision to increase production was to get Russia back to the table. Even though both nations needed the price of oil to be high so as to balance their budget, they still kept up with the price war. The other oil-producing elephant in the room, the US, which saw its shale oil producers suffer as a result of the price dispute tried to get Russia and Saudi Arabia

back to the table. At the end of the day, Saudi Arabia called for an emergency OPEC+ meeting in April and OPEC+ decided to cut 9.7 million BPD in combined production for two months (May and June) OPEC crude oil production fell to the lowest in thirty years at 22.69 million BPD.



The Biggest Threat to OPEC

In just five years, OPEC led by Saudi Arabia has instigated two price wars that had a drastic impact on oil price, this price war even though caused by Saudi Arabia affected them in the long run as they ended up spending above their means and their initial attempt to destroy the shale industry was not successful. Maybe we got it all wrong, is the shale industry or the US rising production really the biggest threat to OPEC dominance? And to the US, as the rise of the shale Industry really brought the energy security that they have longed chased? The answer to those two questions is 'No'.

The US shale industry regardless of their increasing production does not have sufficient power like OPEC does to influence oil prices. Yes, the constant rise in US shale production has affected oil prices, but this is just mild compared to how high the oil price can really rise if the right factors are checked. As the world keeps on growing we are faced with the challenge of meeting energy demand, hence oil demand is forecasted to grow, this is where OPEC has the advantage seeing that they have the highest percentage of oil reserves in the world and unlike the shale reservoirs that depletes faster, the conventional reservoirs that OPEC has access to can keep up production for a long time.

So if the US Shale Industry is not the biggest threat, what then is?

Reports from the International Energy Agency (IEA) says that the shares of renewable energy are forecasted to grow faster than that of oil and coal in the coming future, And from previous data, we are forced to believe that 'Energy Diversity and Climate Change' have reduced the growth of the oil industry as most developed countries have started embracing green technology and are more concerned about their carbon footprint. A lot of industries such as Tesla and Nikola are producing vehicles that need not run on gasoline, countries like the US and China that are deep consumers of oil have since started to

invest in greener technology and have transformed their electricity sector to be free from coal and oil consumption by focusing on other primary energy sources like gas, wind, and solar.

In the coming future, OPEC members will have to come together and work as a single collective unit to maintain oil prices high but this will still be tough as climate change activities are becoming more rampant and investors are beginning to take their money elsewhere. The US shale industry is not left out of the effect of the transition, shale oil is expensive to produce and it has been a money pit for investors for the past ten years now, but this has reduced due to recent activities, reports from Reuters says the last oil price drop affected more than 50% of shale oil and left some of them filing for bankruptcies.

In order for OPEC to maintain their market shares and remain the dominant force, they have to be strategic about their decisions and be very cautious about instigating another oil price war, at the same time, they have to make sure that oil prices do not go too high for consumers to purchase. Necessity is the mother of inventions and the high cost of a good can drive consumers to the opposition, if for any reason the price of oil spikes higher than it normally should be, a lot of consumers will begin to find other alternatives to oil that is cheaper and these alternatives will most likely be renewable forms of energy. OPEC has a big decision to make in the coming future and the big question everyone is asking is "Will their price over volume strategy keep working for them?".

January 2020

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				2	3	4
				Oil steadies amid Middle East tensions, shrinking stockpiles. OPEC output falls.	Oil soars toward \$70/barrel in the wake of strike on Iran's military leadership	Oil industry braces for more Middle East turmoil after Soleimani killing
	6	7	8	9	10	
Equinor targets near-zero emissions in Norway by 2050	Oil surges as Iran says it attacks Iraq base housing U.S. troops	US-Iran crisis: Buhari meets NNPC GMD as oil prices rise.	China offers access for foreign oil and gas explorers as part of U.S. trade deal.	Oil steadies after giving up gains from U.S.-Iran hostilities.		
12	13	14	15	16	17	18
OPEC+ members stay focused on production cuts despite Middle East unrest.	Global coalition focusing on ocean energy established, and it has some big backers	South America's 'largest' solar photovoltaic project is up and running.	Oil trades near six-week low as U.S. stockpiles rise	Nigeria's daily oil production plunges to 1.57m barrels	Work starts on world's 'largest offshore wind farm' that could power 4.5 million homes.	
19	20	21	22		24	
Crude prices jump on Libya export blockage, Iraq disruptions	Wind energy powerhouse Vestas announces plans for 'zero-waste' turbines.	Russia plans to show OPEC+ compliance by excluding a key metric	Oil prices decline on concerns new virus may curtail demand		U.S. sanctions energy traders, tightening the screws on Iran.	
26	27	28	29	30	31	
Brazil stays out of OPEC to maximize its output expansion	Oil falls to three-month low as virus spread raises demand fear	Exxon at a 10-year low shows challenges for oil's biggest major	Oil extends recovery as traders reassess virus threat to demand	Cargoes pile up as Chinese demand for Latin American oil grinds to a halt.	Exxon Mobil and Chevron posted the weakest results in years	

UNDERSTANDING OIL PRICE

A Glimpse into Black April



Oil is a commodity that is traded globally and hence the price of oil affects the global economy, understanding how the oil price is determined is a rigorous one as there are multiple factors that affect it, In this article, we will cover the basics as well as everything you need to know as to why the Oil price is a subject of interest for many ranging from Oil Producers, World Leaders, Investors, Traders, Refineries and Final Consumers.

We also included a bonus content where we give a full explanation as to what led to 'BLACK APRIL', also known as the day Oil price went negative for the first time ever.

Let's dive into it then.

By Akinlotan Damilare

INTRODUCTION

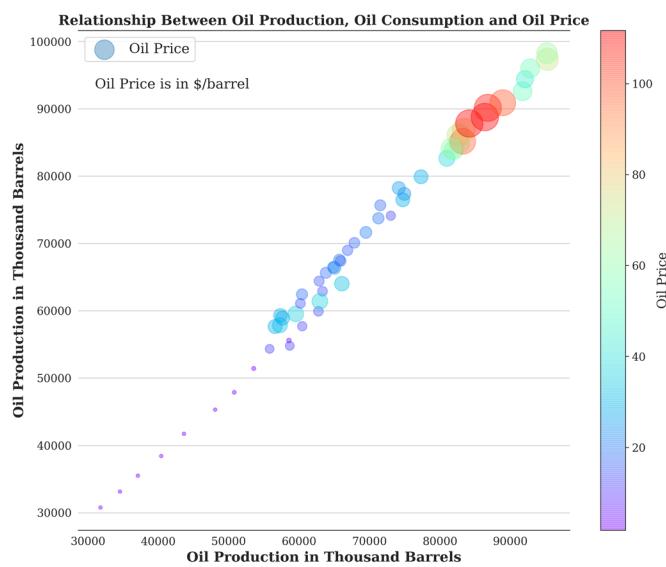
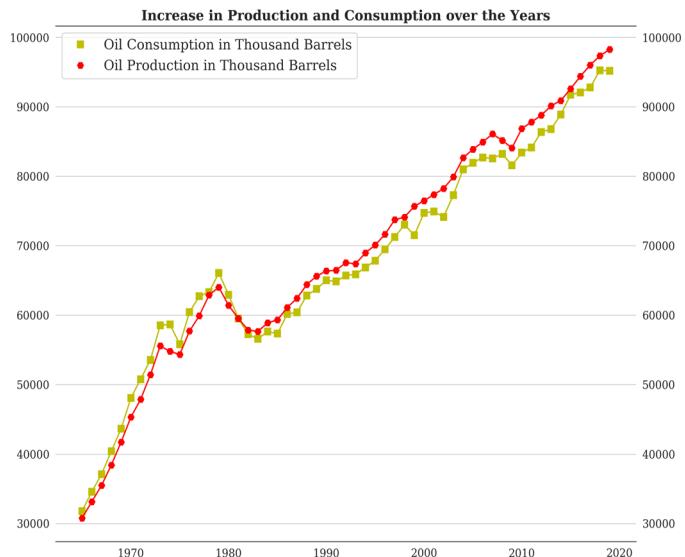
Over the past 50 years, the price of oil has been known to be very volatile and it changes easily based on certain factors and events. Changes in oil prices can, and most times send shockwaves throughout the global economy. With each passing year, oil seems to play an even greater role in the global economy. This is understandable as oil is a globally traded commodity that affects the prices of other commodities so the price of oil is closely monitored. On the [20th of April, 2020 the price of WTI crude oil crashed and fell below zero for the first time ever](#). In order to understand what happened on that dreadful day, you will have to understand few concepts about how the oil price works starting from factors that affect oil price, understanding the different types of benchmarks, and then finally understanding the difference between the oil spot price and oil futures. After we have gone through the basics, we will then give you the full explanation of "BLACK APRIL".

Factors Affecting Oil Price

In this article, we will just touch the surface of some of the factors affecting oil prices, we will dedicate another article that will fully cover the topic.

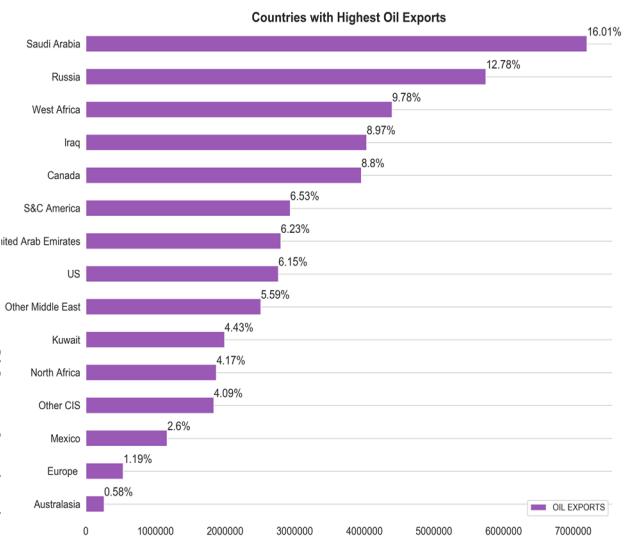
1 Demand and Supply: Just like any other commodity, the oil price is affected by [demand and supply](#), but for oil, understanding how demand and supply affect oil is more complicated than other commodities. To make it simple, Demand comes directly from the consumers while supply comes from the producers. In order to keep the price of oil high, there has to be a balance between demand and supply. Over the past 50 years, we have seen a spike in oil prices. One of the reasons results from an increase in global oil consumption which has been met by an increase in production.

The charts below show how oil production and oil consumption have increased over the past 50 years and the relationship between oil production, oil consumption with oil prices. An increase in global oil consumption has been met by an increase in global oil production hence driving the price of oil higher on a yearly average.



In a situation whereby there is a ‘shortage in supply (reduction in the production of oil) and a constant demand (consumption of oil remains the same), the oil price is likely to rise’, examples of events like this include the [1973 Oil embargo by OPEC](#). If the situation was reversed and there ‘is an oversupply (increment in the production of oil) and a constant or falling demand (consumption of oil is lower than previous levels), the oil price will fall’, examples of situations like this will be the recent [Saudi vs. Russia Oil Price war](#).

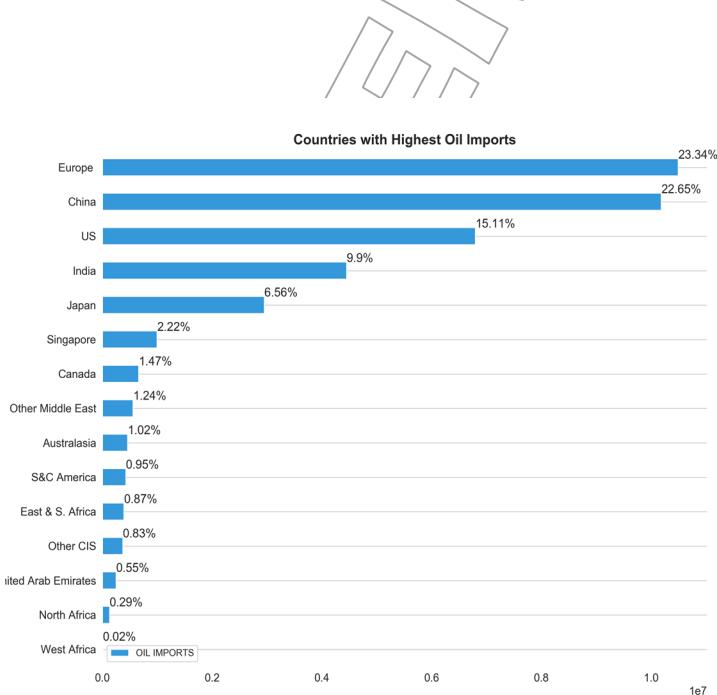
There are many key players that influence the demand and supply of Oil distinctively. On the demand side, we have the biggest oil importers like China, India, Japan, and the US, on the supply side, we have exporting countries like Saudi Arabia, Russia, Iran, Iraq, African countries and even the US. OPEC as a cartel plays a very important role in the supply of oil and have acted in favor of keeping oil price high by maintaining production quotas for their member countries. In recent years this has been offset by increasing production among North America Countries like the US and Canada where production quotas are against antitrust laws, the US and Canada also happen to be part of the largest producers of Oil due to the advancement in Shale Oil production. This ramp-up began in 2015 and has affected supply ever since. In August 2018, the United States became the world’s largest oil producer. In September 2019, U.S. oil production increased to an (at that time) record 12.1 million barrels a day. It was the first time since 1973 that the United States exported more oil than it imported. Ever since then oil price has never crossed the \$100/barrel mark because oil production has continuously overshadowed oil consumption leading to an oil glut and therefore a weaker oil price.



2. Climate and Weather Forecasts:

Consequently, any real or even perceived threat to supply can cause oil, petroleum products, and or natural gas prices to rapidly rise days to months in advance of when the threat may materialize. Natural disasters are examples of such threats and in the US, the biggest and most common are hurricanes. In 2014, the US got approximately 16% of its oil and approximately 4% of its natural gas from production in the offshore Gulf of Mexico.

Furthermore, about 45% of US refining capacity is located along the Gulf coast. When a hurricane passes into the Gulf, exploration and production platforms within a wide swath of the hurricane's projected path are shut down and evacuated. Offshore oil and gas transmission pipelines are also closed so as to minimize spills from infrastructure that might be damaged by waves and or seafloor avalanches that such storms can trigger. And coastal refineries where the hurricane may make landfall greatly reduce or even curtail operations.



The prospect of disrupted supply that these shutdowns would cause can set off price jumps a week or more in advance of a hurricane. And if a storm cripples oil and gas infrastructure offshore or on the coast, prices can remain high for weeks to months afterward. This is, in fact, what happened in 2005 when the U.S. Gulf of Mexico was hit by four hurricanes, including Katrina and Rita which were category five hurricanes, or the largest they come in. Geopolitical conflicts are another supply threat that triggers significant, short-term price volatility particularly for oil, but also for natural gas. In 1991, for example, Desert Storm, the first of the two recent wars in Iraq, caused oil prices to jump almost \$20. A third short-term influence on prices is unforeseen impacts on economic growth.

3. Geopolitics: International relations between countries also affect the oil price and most times this comes in the form of public announcement. We have seen several times where announcements from top oil and gas producers like Russia, Saudi Arabia, and the United States of America significantly influence the price of oil. Of recent, when Russia announced that it will be increasing its production quota after the in-place OPEC plus agreement expires, this was replied to by an equal announcement by Saudi Arabia, this led to a price war and even without practical production increase by these countries, and their announcements influenced the price of oil to decrease. There are so many other examples whereby the hassle between the two countries affected the oil price. Whenever there is a threat to global oil supply such as the explosion of an oil production facility of one of the largest oil producers like Saudi Arabia or OPEC placing deep quotas on their production, oil price tends to rise but whenever the world is hit with a global event like a pandemic or a trade war, oil price tends to drop because these events are marked with slower economic growth which means lesser spending on the consumers' side. The [dynamics of the effects of geopolitics](#) go beyond this but one thing is of certain, it cannot be overlooked.

4. Storage Facilities: Over time, it has been experienced that global oil glut eventually affects oil storage facilities around the world, causing these facilities to be filled up quicker than they should be, this excessive supply of the oil commodity by producing countries often cause the oil price to drop especially when demand for the commodity is not proportional to the supply of the commodity.

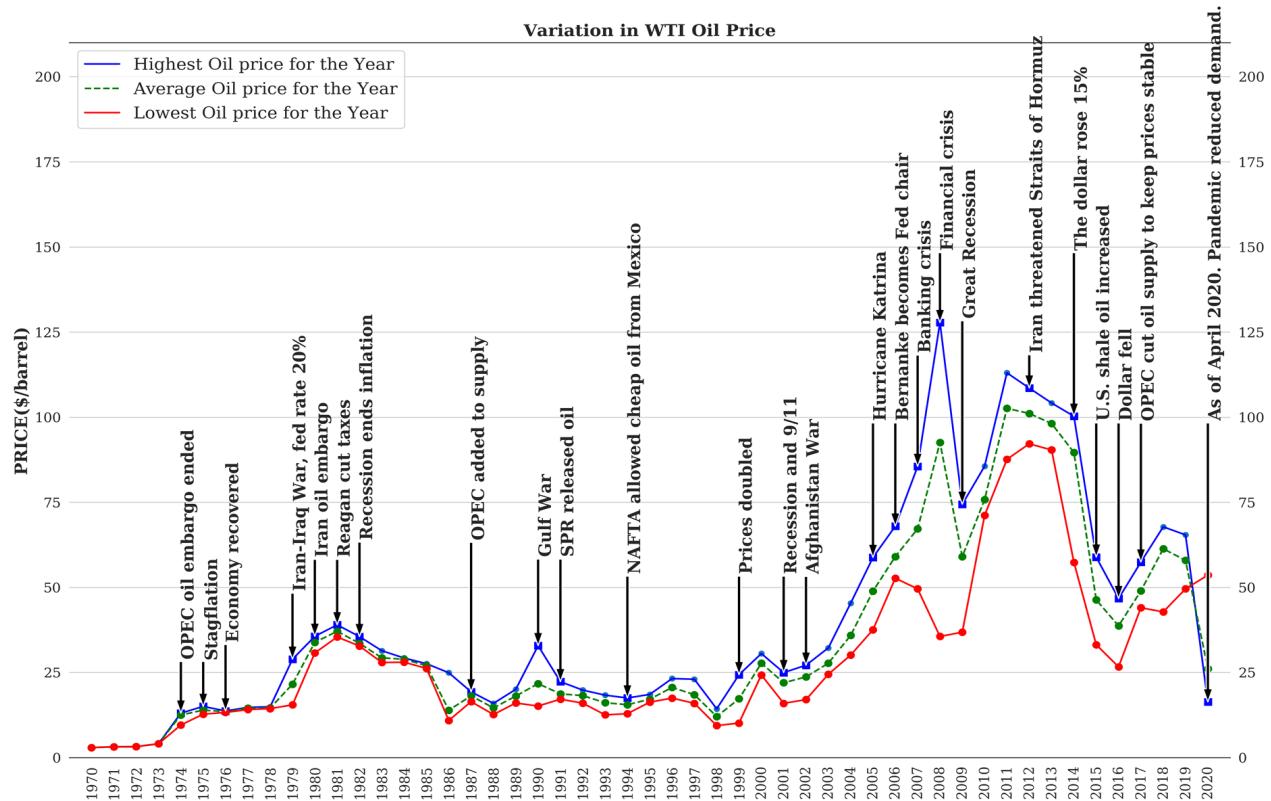
With lesser demand and oil storage facilities getting filled up, producing countries might be forced to reduce production (shut-in some wells) in order to match this reduced demand, this is not the case in most situations as most oil-producing companies will rather keep on producing even at a very low price of oil rather than reducing production or shutting-in some wells as the cost to reopen some wells or to even get these shutdown fields back to optimal rates is greater than the loss they will incur from a lower oil price.

This causes some of these producers to offer their products for even a cheaper price or in worst-case scenarios – pay buyers to take their commodity from them, so these producers can have more storage space to keep their production ongoing and non-stop.

A typical example of this is what happened to the WTI benchmark in April where the oil price went into the negative trend in which producers were paying buyers to take their commodities from them, this, however, was the future (contract) price of the WTI commodity. Future oil prices are discussed in later parts of this article.

The following factors as discussed above influence the price of oil both collectively and distinctively and understanding how they influence the oil price is the first step towards understanding the oil pricing system.

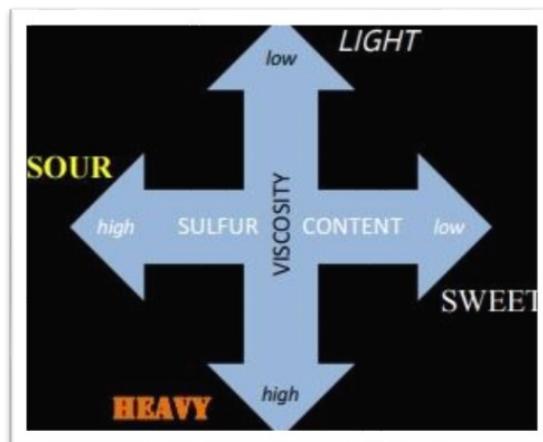
The chart below shows significant events that have occurred in the oil and gas industry and their impacts on the oil price.



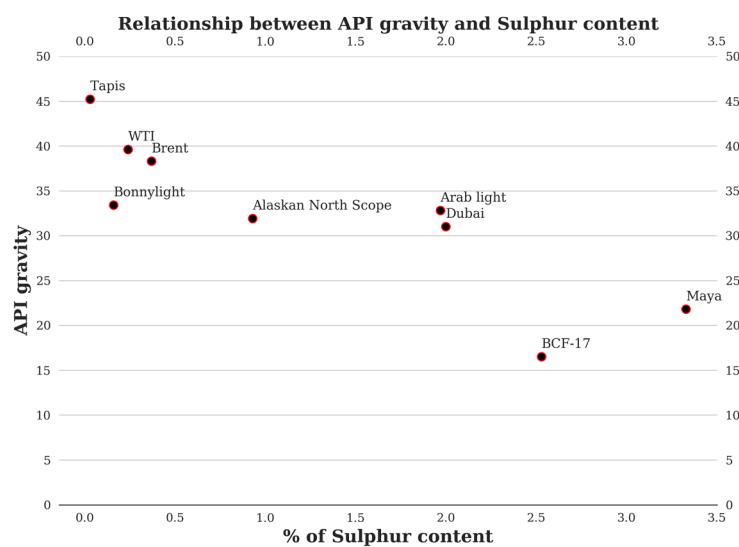
WHAT YOU NEED TO KNOW ABOUT BENCHMARK PRICING.

It is worth noting that not all crude oils are formed equal, we can even say that not two crude streams are of exact same content and component. As a matter of fact, crude oils vary from one region to the next. These crudes vary in terms of the different types and fractions of hydrocarbons they contain. These crudes also vary in terms of sulfur content and viscosity (or the ease with which oil flows). Sulfur needs to be removed during refining to for consumer safety reasons and to prevent damage to production/processing facilities. In general, the higher the sulfur content of the crude, the lower the price it attracts on the open market. Crudes with 'high sulfur content are referred to as being *sour*', while those with 'low sulfur content are known as *sweet*'. As for an oil's viscosity, the lower it is, the greater the fraction of shorter chain liquid hydrocarbons in the oil. And thus, the greater the volume of high value automotive and jet fuels that can be refined from the oil.

Consequently, low viscosity crudes tend to sell for higher prices than high viscosity crudes. Which has a greater fraction of long-chained hydrocarbons require more sophisticated refining capabilities to process. Crude oils having a high viscosity are called *heavy* and those with *low viscosity*, *light*.



Among the different types of crude oils are a special set of benchmark crudes, these benchmarks are crudes with well-defined hydrocarbon and sulfur contents as well as viscosities. The most well-known of the benchmarks are West Texas Intermediate crude or WTI and Brent crude or just Brent, which comes from the North Sea. Both WTI and Brent are light sweet crudes. There are also other common benchmarks, which are generally heavier and shallower than WTI and Brent.



This is why WTI and Brent plot above most of the other benchmarks. The selling prices of the benchmark crudes are widely published. This is because the prices serve as benchmarks for helping set the sale prices of just about all other crudes in the world. Setting aside other factors that affect price, the sale price of crude oil will differ from the market price of a benchmark crude by an amount that reflects the particular crudes hydrocarbon content, sulfur content, and viscosity relative to those properties for the benchmark crude. Crude produced in Texas that has a higher sulfur content and viscosity than WTI will generally be priced at an appropriate discount to WTI. In the same way that there are benchmark prices for oil, there are also benchmark prices for natural gas.

Country	Production cost (bbl.)	Total cost (bbl.)*
United Kingdom	\$17.36	\$44.33
Brazil	\$9.45	\$34.99
Nigeria	\$8.81	\$28.99
Venezuela	\$7.94	\$27.62
Canada	\$11.56	\$26.64
U.S. shale	\$5.85	\$23.35
Norway	\$4.24	\$21.31
U.S. non-shale	\$5.15	\$20.99
Indonesia	\$6.87	\$19.71
Russia	\$2.98	\$19.21
Iraq	\$2.16	\$10.57
Iran	\$1.94	\$9.09
Saudi Arabia	\$3.00	\$8.98

TYPES OF OIL PRICES

The prices for oil, petroleum products, and natural gas that you commonly see quoted in newspaper articles are the spot prices for the benchmarks for these different types of hydrocarbons.

A spot price of a hydrocarbon is its sales price for immediate delivery at a pre-arranged location and it requires immediate payment. The meaning of immediate in this case can be anywhere from hours to tens of days from the sale agreement, but it is very soon after the agreement with the payment often being made at the time of delivery. Spot Prices are not exclusive to hydrocarbon benchmarks. Natural gas from anywhere and all types of crude oil and petroleum products can be sold on the spot or in, what is referred to as, the **Spot Market**.

The Spot Price will reflect the demand for the hydrocarbon at the delivery point and, in the case of oil, the quality of the crude, with respect to that of a regional benchmark, like West Texas Intermediate here in the U.S. Spot prices reflect the current balance between the supply and demand for hydrocarbon. For example, if many producers temporarily have more oil on hand than they could afford to store, the producers can sell the excess on the spot market which for a large sell-off may push the benchmark price down.

Conversely if demand for say gasoline spikes and refiners are short on their supply of feedstock oil, the refiners can buy what they need on the spot market which may drive the benchmark spot price up. The spot market itself has no physical location. In other words, there is no set of trading floors where all spot transactions take place. So how then are spot prices for oil and natural gas benchmarks determined? They typically come from one of two other types of prices. One of these is from prices associated with what are known as **over-the-counter sales**.

An **over-the-counter sale** occurs directly between private parties, independent of any trading exchange. The sale price, amount, location, and timing of delivery are negotiated between the parties as part of the sales contract.

The vast majority of oil and gas sales are over the counter. Being private, the prices of these sales are not publicly recorded. However, there are market intelligence firms such as [Platts and Argus](#) who collect voluntary information on over the counter sales. And use these to calculate prices for benchmark hydrocarbons, such as West Texas Intermediate. These *Platts and Argus* benchmark prices are widely published and often the ones you see in the paper. The other type of price that is often reported comes from **futures contracts** for oil, petroleum products, And natural gas.

A **futures** sales contract is similar to an over the counter sales contract, except that the futures sales contract is highly structured and uniform. The quantity, location, and timing of future delivery are all pre-specified. So, there is no negotiation involved in these contracts.

Furthermore, futures contracts are only sold through trading exchanges, the two largest being the *New York Mercantile Exchange or NYMEX* in Manhattan and the *Intercontinental Exchange or ICE* in London. For example, NYMEX offers futures contracts for oil that can be received one to 18 months in the future. With the delivery point for the oil being Cushing, Oklahoma.

Futures contracts allow buyers and sellers of oil or natural gas or petroleum products to lock in a sale price and thus hedge against price changes that could cost them lots of money if they waited to buy or sell on the spot market at the time that they need to physically acquire or offload product. Futures contracts also allow price speculators to buy and sell hydrocarbons without having. To take physical delivery of the product. So, the speculators can always sell the product as the time for delivery approaches. A benefit of the involvement of speculators is that they increase the numbers of buyers and sellers in the futures market as well as the number of sales.

Making the futures contracts much more liquid or easier to buy and sell. When the different prices of futures contracts from 1 to 18 months out into the future, are plotted versus month they form a forward price curve. This forward curve reflects what market participants anticipate will happen to oil, petroleum product, or natural gas prices, moving forward as a result of projected changes in demand and or supply.

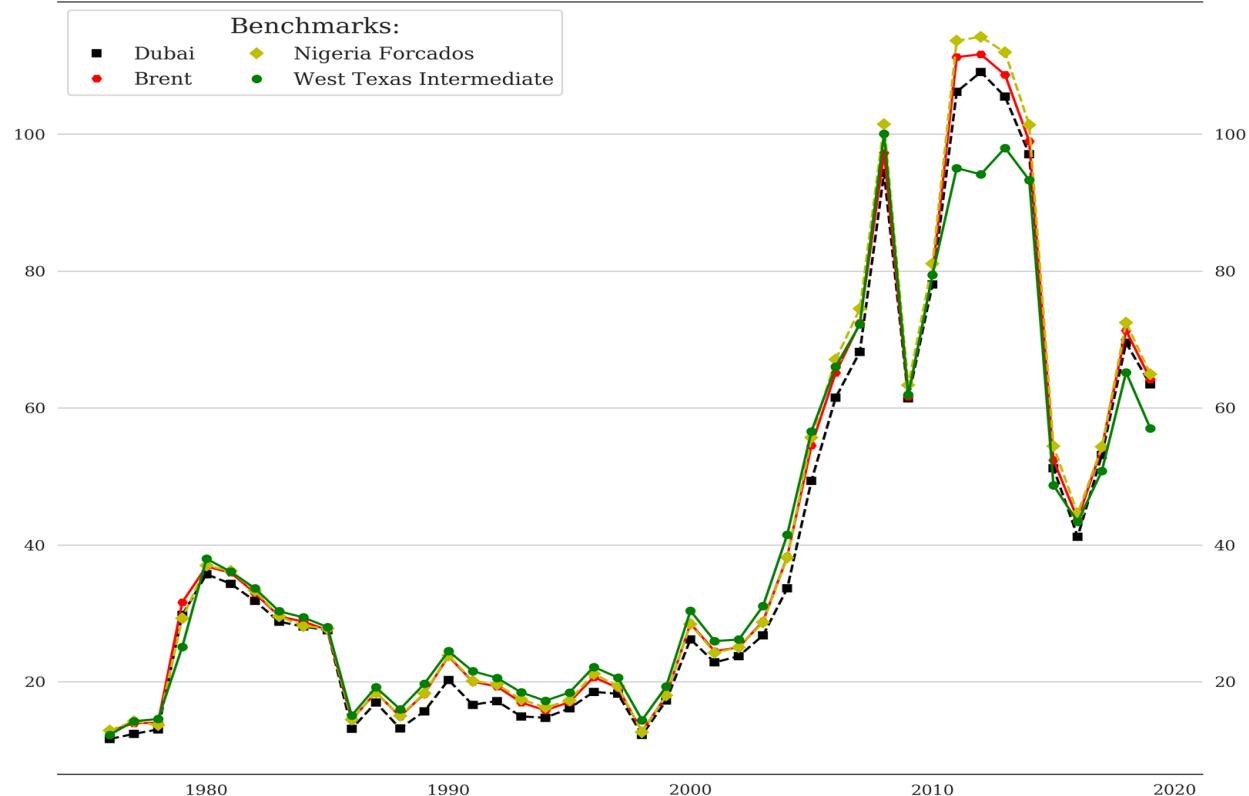
Typically, a forward curve will show prices declining into the future indicating that market participants expect that supply will be increasing relative to demand. This is known as backwardation and it suggests selling now will be more profitable than selling in the future. At times, the forward curve will show prices increasing into the future, indicating market participants foresee supply tightening relative to demand. In this case, the forward curve is said to be in contango. It suggests that if the cost of temporarily storing a hydrocarbon is not too expensive, it may be profitable to sell the hydrocarbon in the future. Thus, the futures market not only enables buyers, and sellers of oil, petroleum products, and natural gas to hedge again against price volatility, it also contributes to price transparency, and it provides information on market expectations for future oil petroleum products and natural gas supply-demand in prices. Where the futures market relates to the Spot market is in the price of the one month ahead contract. This is the contract for which prices can be best estimated from current prices. And so is generally closest in value to the spot price. In fact, since this contract closes within 30 days its price is the other one that is commonly cited for the spot

price in newspapers.

In summary, there are three types of prices for oil, and natural gas and petroleum products. **Spot prices, over the counter sales prices, and futures contract prices.** While all are determined separately, they are also all based on each other and influenced one another. This interdependency is one of the things that makes the pricing of oil and gas so complicated, and in fact, can contribute to oil and gas price volatility.

We have successfully covered factors affecting oil prices, benchmark pricing, and types of oil prices. With this knowledge, you can now understand fully what transpired the day oil price went negative for the first time in history.

Spot Oil Prices over the past 50 Years for Different Benchmarks



BLACK APRIL EXPLAINED

On the 20th of April, 2020, oil price fell below zero to **-\$39/barrel** for the first time ever in history. A lot of speculation went around as to why this occurred, those who were following the oil market up to that point expected a significant drop in oil price due to certain events that were occurring already but the price going below \$0/barrel was unprecedented.

The first thing to note is that it was the **future oil price of US West Texas Intermediate Benchmark** also known as WTI crude that fell below \$0/barrel to -\$39/barrel. From what we know about futures oil contract, it is highly structured and uniform, the quantity, location, and timing of the future delivery are all pre-specified and hence there's no need for negotiation in this contract. Let us see it as a future sale; the amount I want to sell my product for in the next 1 month or more, this is done so as to exclude oil price volatility and set a fixed price between the buyer and seller.

The main reason why WTI went low was due to the effect of full storage capacity in Oklahoma, Texas, and other storage facilities in the US. The May contracts for WTI, the American crude oil variant were due to expire on Tuesday, April 21. As the deadline approached, the prices started plummeting. This was for two broad reasons.

Firstly, there were many oil producers who wanted to get rid of their oil even at unbelievably low prices rather than choosing the option of shutting production. The reason for not shutting production is that it is costlier to shut down and then restart production at a later date that is unknown compared to the marginal loss sales derived from selling the oil for a very cheap price.

Secondly, from the consumer side, that is those holding these contracts, it was an equally big headache. Contract holders wanted to get wriggle out of the compulsion to buy more oil as they realized, quite late in hindsight, that there was no space to store the oil if they were to take the delivery.

One thing you also need to know is that there was already excess supply and inventory build as recorded by the EIA starting from the previous year. This was then made worse by the global outbreak of the Coronavirus that shattered demand since the transportation and industrial sector, two sectors that consume a huge percentage of oil produced started reducing their activities.

As if this was not enough, an oil price war was instigated by OPEC defacto leader-Saudi Arabia and Russia, when Russia refused to participate in production cuts, this infuriated Saudi Arabia forcing them to pump more oil into the market, worsening the oversupply and leading to a drastic reduction in oil price. In light of all this, the US, who is the highest oil producer in the world refused to reduce their production.

The scenario whereby the Corona Virus and Oil price war were occurring at the same time is known as "[Mutually Assured Destruction](#)" and this marked with an increase in global oil production led to the oversupply that finally led to the oil price crash in April, even though it was worse for WTI Crude because of reports that its main storage facility located in Oklahoma were filling up rapidly.

At the end of it all, it all comes down to demand and supply; supply kept on increasing even while demand reduced drastically. Traders within the oil market started predicting the danger ahead and started selling their contracts, some oil producers started paying off people to take their oil because of low storage spaces. It was an issue of producing more than was needed at that particular time.

It has been two months since that drastic event and as of July, the price of oil has found balance at \$40/barrel showing quick signs of recovery due to increasing demand.

February 2020

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						
2	3	4	5	6	7	
UAE finds world's biggest gas field since 2005 (The Jebel Ali reservoir located between the two emirates has 80 trillion cubic feet of gas resources)	Oil tumbles below \$50/barrel with virus sapping Chinese demand.	British Petroleum shines in oil industry gloom	Oil reversed five days of losses as the potential for an OPEC+ production cut overshadowed an uptick in U.S. crude inventories.	Tullow to cut 40 percent of its jobs in Kenya after poor Africa and Guyana results.	Oil pared its fifth straight weekly loss on optimism that OPEC+ will deepen output cuts. Shell's new solar farm to help power a natural gas plant in Australia	
	10	11	12	13	14	
	Oil hovered around \$50/barrel as expectations of urgent OPEC meeting fade	Natural gas hits four-year low on 'epic' U.S. demand failure.	Oil posts biggest gain since early January. OPEC cuts forecast as virus dents China's oil demand.	BP expands carbon capture capabilities to meet 2050 climate goals	Ghana approves Tullow gas-flaring request to support offshore development.	
	17	18	19	20	21	
	Oil steadies as Asian states seek to offset virus impact.	US slaps Rosneft (Russia's largest oil producer) with sanctions for Venezuelan oil trade ties.	Oil reaches two-week high on hope for Chinese demand revival	Cyberattack targets a U.S. natural gas compressor facility, shuttering facility for two days	Alpine Penelope crude oil tanker attacked while in transit towards Lagos, nine personnel kidnapped	
	24	25	26	27	28	
	Schlumberger opens Saudi Arabia manufacturing center. Oil falls sharply alongside other commodities as uncertainty grows	Oil sinks on CDC (Centers for Disease Control and prevention) warning of impending virus Outbreak in US	BP leaves U.S. oil lobby groups in climate-policy change.	Crude falls to lowest in a year as corona virus panic grows.	Oil sinks in worst week since 2008 and oil market hits and misses for the week.	

GLOBAL OIL CRISIS

Deployment of Economic Sanctions and its effect in the Oil Industry

Did you know that the *1973 Oil Crisis which is referred to as the “first oil shock” had both short- and long-term effects on the global economy?* Even more interesting, what was the cause of this oil crisis?

Ideally, Countries with significantly large crude oil reserves should possess a comparative advantage over other countries in terms of production levels since they are boosted by more oil reserves. In reality, this is not the case because there are certain restraining factors (i.e. political, economic, or technical factors) that tend to affect production levels in the global oil industry.

In this article, we will briefly highlight the effects of economic sanctions on the global economy and as a constraint to higher oil production levels in top countries with the largest oil reserve in the world which affects overall economic activities in such countries.



By Viashima Bitto

Historically, countries have imposed trade restrictions or economic sanctions in the form of embargoes or trade sanctions for various reasons and the effect from these sanctions has affected targeted countries and the global oil industry as a whole. A sanction is a foreign policy tool that is applied in international trade and politics. Countries that impose sanctions on others tend to possess an absolute advantage in international trade (i.e. economically powerful and highly dependable for certain goods and services) and also a significant political influence based on their many allies and global involvement. The main purpose of these sanctions is to instigate a change in behavior or policy of targeted countries.

Sanctions Vs. Embargoes

Sanction: this refers to the penalty levied on another country, or on individuals of another country for political, economic, moral, or environmental reasons. An economic sanction is a commercial and financial penalty imposed by one or more countries and targeted against a country, organization, group, or individual. A sanction can be *unilateral* (i.e. a single country enacting sanction), *multilateral* (i.e. a group of countries enacting or supporting a sanction), or *based on the flow of goods and services in and/or out of a country* (i.e. Import and export sanctions). It can take many forms such as quotas, tariffs, non-tariff barriers, asset freezes or seizures, and embargoes.

Embargo: this is the restriction in a trade that prevents a country from exchanging products, and services with another country. These trade sanctions are mostly used to protest against another country's practices.

Sanctions are often considered to be "partial embargoes" while in practice, they tend to have the same effect as embargoes when trade sanctions are comprehensive. To fully understand the effect of trade sanctions and embargoes on the global oil industry, we shall look at the **1973 oil crisis** and recent sanctions enacted by United States (US) on some countries with the largest oil reserve in the world.

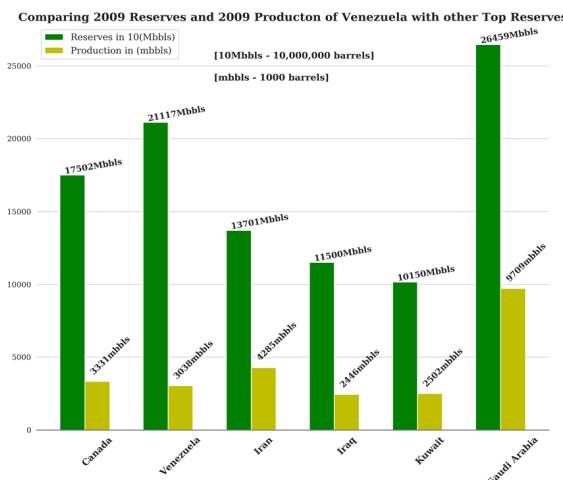
1973 Oil Crisis: OAPEC Oil Embargo on US and others (1973-74)

In October 1973, the Organization of Arab Petroleum Exporting Countries (OAPEC) issued an embargo on oil shipments which was targeted at the US, and other countries like Canada, United Kingdom, Japan, Netherlands, and South Africa as punishment for resupplying and supporting Israel during the *Yom Kippur War*. At the end of the embargo in March 1974, the price of oil which was initially at \$3 per barrel rose to about \$12 (400% increase) globally with US prices significantly higher. This embargo led to the 1973 oil crisis which is referred to as the "first oil shock". Some of the effects of this crisis included the worsening of the worldwide stock market crash of 1973-74 and the economic loss in targeted countries.

US Economic Sanctions on Iran and Venezuela and its effects in the Oil Markets

The US is one of the most powerful countries in the world and this is boosted by its overall economic prowess and political influence on most countries in the world. Given this position, the US has enacted sanctions on countries and individuals whose policies are against theirs. Oil has been a major global energy source since its commercial use hence its economic importance to both consumer and producer countries can nor be overemphasized as they both need it to drive all sectors of their respective economies.

US economic sanctions on Iran and Venezuela have generally affected oil markets and prospects for these countries. The overall effect has been severe and has led to a decline in economic growth as these targeted countries rely on the revenue generated from the oil sales to fuel development and increase production levels in the oil sector and the economy at large. Iran and Venezuela notably own very large crude oil reserves but can only boast of relatively very small production levels as a result of these sanctions.

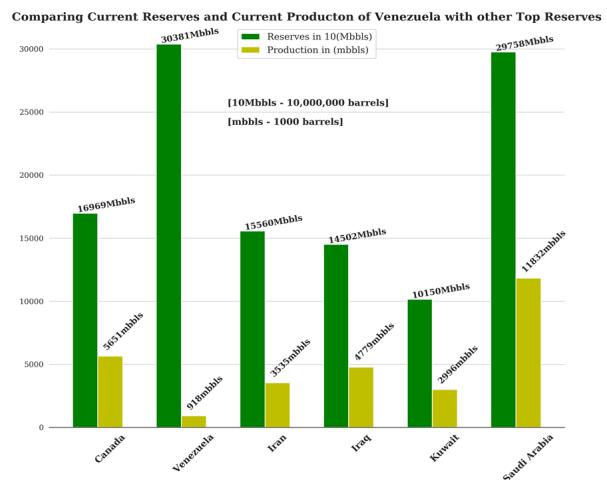


Iran

Iran holds the fourth-largest proven oil reserves in the world with an estimated [proven reserve of 156 billion barrels as of 2018](#). Iran is one of the founding members of the Organization of Petroleum Exporting Countries (OPEC).

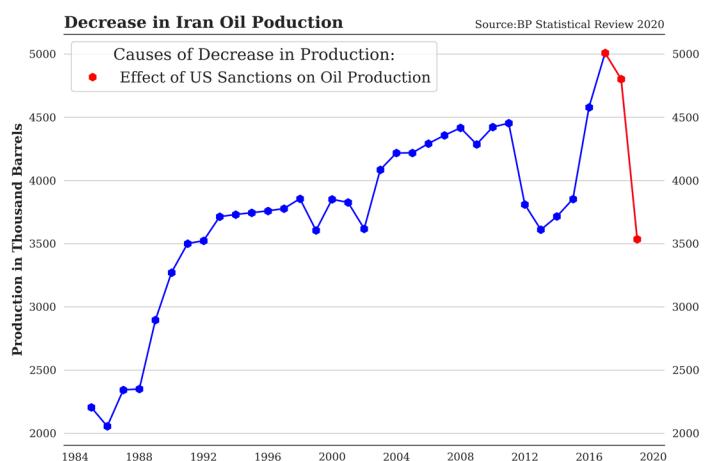
Iran's oil sector has been a target of multiple US sanctions for over three decades (since the 1980s) which have been implemented for the sole purpose of reducing oil exports to a minimum (zero in the long run). The US created various sanctions framework to reduce oil exports by discouraging the buyers of Iranian oil thus reducing their oil export revenue. One core element of this framework includes the financial sanctions i.e. prohibition on opening and accessing U.S. bank accounts thus restricting any financial transaction between Iran's Central bank or sanctioned bank(s) and another foreign financial institution. Other elements of this framework include;

- ◆ A 180-day wind-down period for implementation (i.e. Significant Reduction Exceptions, SRE)
- ◆ Provision for the exception of financial institutions from sanctions based on reducing Iran Oil purchases.
- ◆ Administrative consideration of impacts on global oil prices and supplies.
- ◆ Outreach to other petroleum-producing countries.



With U.S. participation in Iran's nuclear development program and a [Joint Plan of Action](#) (JPA) agreement signed and effected between January 2014 and January 2016 and a JCPOA implemented on January 1, 2016, Iran oil export sanctions were suspended and its oil buyers were allowed to purchase its oil at the production level. However, with U.S. withdrawal from the Iran Nuclear Agreement (JCPOA), all Iran oil export sanctions have been imposed to date.

From the chart below, one can see the variation in Iran oil production caused by economic sanctions. Iran has the capacity to produce more oil if the sanctions are lifted completely.



Venezuela

Venezuela holds the largest proven oil reserves in the world with an estimated proven reserve of 303 billion barrels of crude oil as of 2018. Venezuela is also a founding member of the Organization of Petroleum Exporting Countries (OPEC). U.S. oil companies began to explore and produce oil in Venezuela as early as in 1919. However, in 1976, Venezuela created its own oil company – Petroleos de Venezuela S.A (PDVSA) after the nationalization of most foreign companies operating in the country. This led to a reduction in investments by most foreign companies such as Exxon and also reductions in oil production level as it dropped from 3.7 million BPD in 1970 to 1.6 million BPD in 1988. Government laws and policies regulating the oil sector enacted by the Chavez Administration kept discouraging most foreign companies to operate as PDVSA controlled major parts of the agreements.

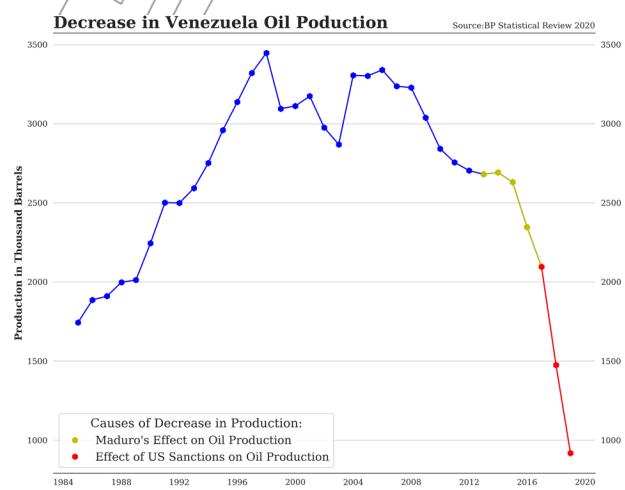
Following the death of Hugo Chavez in 2013, the Nicholas Maduro administration took over. The administration made a series of bad policies and behaviors such as anti-democratic actions and human rights violations which led to a sanction by the U.S. government. The U.S. sanctions framework targeted the following:

- ◆ Venezuela's access to finance
- ◆ Termination of U.S.-Venezuela petroleum trade
- ◆ Potential impact on Venezuela's petroleum trade with other countries.

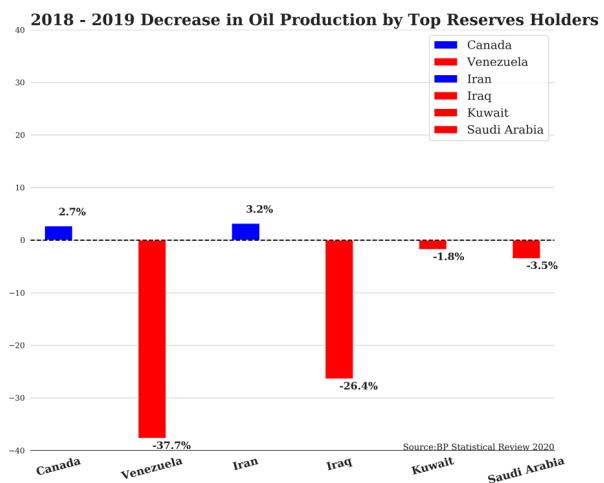
The sole purpose of these sanctions was to eliminate the U.S.-Venezuela petroleum trade and making it difficult for Venezuela to find other buyers.

With the imposition of the financial sanction by the U.S. in 2017, Venezuela's oil production levels dropped significantly at about 50% between August 2017 and January 2019 although oil production had been declining prior to the financial sanction due to inadequate investments, poor financing and

maintenance of petroleum assets. This sanction made it challenging for PDVSA to access financial capital from debt markets and to obtain cash from its subsidiary (PDV holding which an oil refining and marketing company called Citgo) based in the U.S. This limitation led to poor financing of the operations and development of the oil sector in the country.



The decrease in oil production in Venezuela is one of the worse ever recorded in history and has really affected the economy of the country. It's also not a good reflection on the country as they hold the highest reserves and they record one of the weakest production for an oil-rich country. Over the past year, the decrease in oil production took its worst tumble and decreased by almost 40% down to 918,000 barrels per day.



Conclusion

As earlier stated, economic sanctions are deployed to instigate a change in behavior and policy of the ruling government of targeted nations. The enactment of these sanctions can be a success or a failure depending on how effective they are. However, most sanctions have failed to achieve their purpose of forcing a change in behavior or policy of the ruling government because the adverse effects tend to affect the citizens more than those in power thus affecting the overall economy of targeted nations.

The 1973 oil embargo is believed to be a failure as most targeted countries did not change their policy (i.e. withdraw of their support to the Israeli) since the Israeli forces did not withdraw from the Arab-Israeli war. In the long run, most Western nations had changed their policy towards increased explorations, alternative energy research, energy conservation, and improved monetary policies to better fight inflation as a result of the effect of the 1973 oil crisis.

The US economic sanctions on Iran have affected its oil sector which is the bedrock of the nation's overall economy as production levels have significantly declined over

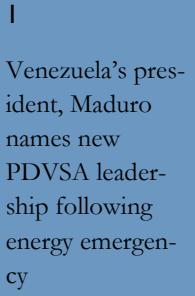
the years. With the financial sanction also in place, Iran is denied access to financial capital that can be used to develop its oil sector and boost its economy.

The US has been one of Venezuela's major oil buyers and particularly the biggest cash buyer prior to the sanctions on the nation. These sanctions have prevented US companies from dealing with PDVSA and have further spooked PDVSA's joint venture partners and customers. The US government has also frozen all Venezuelan government assets in the US and has threatened to impose a sanction on any company that renders any form of assistance to the Nicholas Maduro's government, as the Trump's administration continues to step up its bid to force Nicholas Maduro out of power.

The big question still remains, can Venezuela rise up back to previous oil production records, or is this the beginning of the end of the Highest Oil Reserves in the World, if so, what happens to all those untapped oil resources still in the ground?



March 2020

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1 	2 Oil-state senators push back on Trump's plan to end biofuel waivers	3 Oil price recovery ends as Russia walks out of OPEC+ joint meeting in Vienna.	4 Chevron CEO says Chevron won't follow rivals' 'aspirational' climate goals,		6 Russian resistance hammers oil prices, pushing OPEC to the brink 	
8 	9 Saudis plan oil-price war, slashing prices while raising output.	10 Saudis escalate oil price war with another output hike	11 U.S. oil output to fall next year, for the first time since 2016		13 Abu Dhabi discounts its Murban crude in growing oil price war	
	16 Russia keeps Saudis at arm's length, as oil price fall continues	17 China refuses oil from Russian companies hit by U.S. sanctions	18 Oil falls to lowest since 2003 as global economy stalls	19 Oil war hits Saudi as Saudis cut nearly 5% from national budget	20 Oil's rebound from 18-year low comes as economies attempt a recovery	21 Oil's demand plunge doing more damage than the price war.
		24 Oil steadies on Fed action, hope for U.S.-Saudi talks.	25 Chevron cuts spending by \$4 billion, suspends share buybacks		27 Oil resumes plunge after IEA warns of 'free fall' in demand (IEA stands for International Energy	28 Oil at historic lows began to force shut-in of wells
29 	30 Consumption drop most dangerous for U.S., Russian, Canadian crude. Oil hits 17-year low with market awash in crude	31 Oil selling below \$10/barrel at key American hubs. Oil posts worst quarter ever as physical market cratered.	NNPC: The NNPC had a total crude oil and gas export sale of \$256.19 million in March 2020, which decreased by 30.89 per cent, compared to the previous month.			

AN OVERVIEW OF THE NIGERIAN OIL INDUSTRY

History of Subsidies



What have you heard about subsidy?
Better still what do you understand by
subsidy?

In this article, we will feed you with a little bit of history of “Subsidy” in Nigeria, explaining how it started and show you how it has changed over the years, at the same time explaining the impacts it has had on the poor and rich. We will allow you to come to the decision yourself as to whether subsidy is indeed good for Nigerians or not.

Did the Nigerian Government make the right decision to remove subsidy? That will be left for you to decide, let's dive into the Nigerian Oil Industry.

By Adegoke Seunfunmi

The era of fuel subsidy is gone forever in Nigeria, the Group Managing Director of the Nigerian National Petroleum Corporation (NNPC), Mele Kyari, has said. Fuel subsidies tend to be politically popular, especially when the **market price** of fuel climbs. Fuel subsidy has been a popular term in the ears of Nigerians so it came as a shock for many when the news came in. Going forward, the oil chief said, “*There would be no resort to either fuel subsidy or under-recovery of any nature. NNPC will play in the petroleum marketplace, just like another marketer in the space, but we will be there for the country to sustain the security of supply at market price,*” he said, indicating the government was not deregulating the petrol sub-sector, and would still fix prices. In view of this, President Muhammadu Buhari has granted approval to the Petroleum Products Pricing Regulatory Agency (PPPRA) to remove the price cap, otherwise known as subsidy that was in place for premium motor spirit (petrol).

For its part, the PPPRA said: “From the commencement of these regulations, a market-based pricing regime for Premium Motor Saint (PMS) shall take effect. The agency shall monitor market trends and advise oil marketing companies on the monthly guiding market-based price.” This guiding market-based price is going to be the new pump price of PMS.

Nigeria had capped the pump price of gasoline, which is bought on the wholesale market on a dollar-denominated basis at Naira 145/liter (40 cents/liter) since 2016. The government’s subsidy was the difference between the landing cost and the regulated pump price. In March, the government cut the gasoline pump price 10% to Naira 130/liter and again to Naira 108/liter in May. The PPPRA said at the time it had begun fuel price modulation in accordance with prevailing market dynamics and would respond appropriately to any further oil market development.

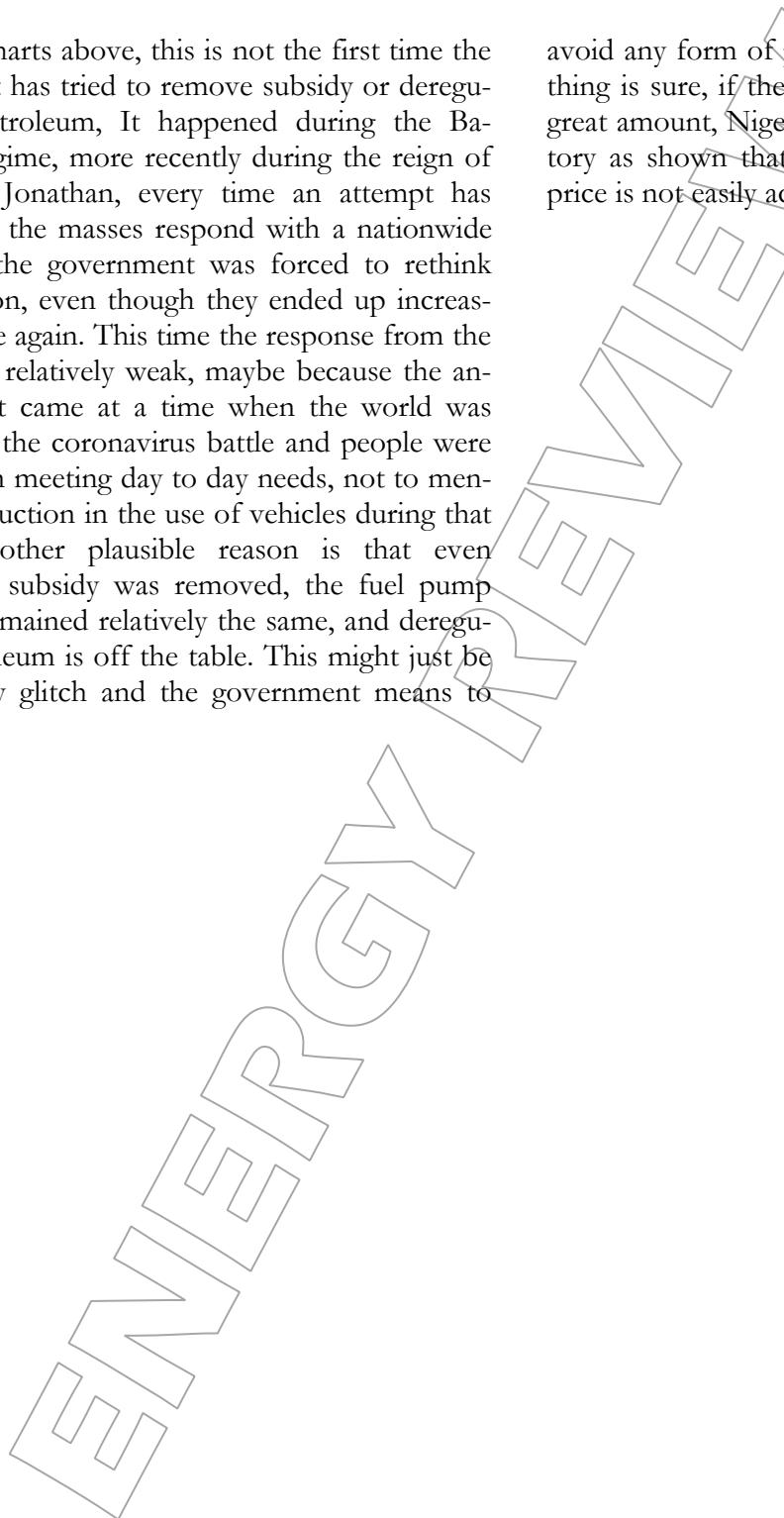
So far we have not seen any violent responses from the masses as most Nigerians have gotten used to this new pump price. In previous years, attempts have been made to deregulate petroleum and remove fuel subsidy, but the response was met by angry Nigerians who went on strike. From their point of view, it doesn't seem fair that an oil-producing country gets to pay that amount for fuel, and just like any other problem in the country, they blame the government for being corrupt and stealing all the money generated from oil revenue. Maybe this is true, but another logical reason can be traced down to when the price of oil fell to record lows of \$16/barrel in the month of April this year, the same month that the announcement to remove subsidy was made. Removing subsidy makes sense from the point of Government since they are not generating enough revenue to keep on paying for subsidy. Even though the current price of oil has averaged \$43/barrel for the month of July, the government is still not generating enough revenue to pay for the subsidy. The negative effect of this then falls on the poor masses as the fuel pump price will continuously be above the N100 mark for a long time leading to a spike in transportation services, rise in the price of goods and services. The coming months will tell us how the effect of the removal of subsidy will play out and who knows, we might just be a few steps away from a nationwide strike.

A History of Increase in Fuel Pump Price over the past 50 years

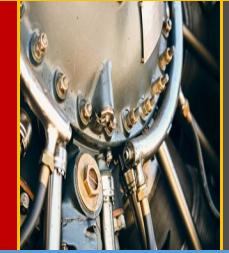


From the charts above, this is not the first time the government has tried to remove subsidy or deregulate the petroleum. It happened during the Babangida Regime, more recently during the reign of Good-luck Jonathan, every time an attempt has been made, the masses respond with a nationwide strike and the government was forced to rethink their decision, even though they ended up increasing the price again. This time the response from the masses was relatively weak, maybe because the announcement came at a time when the world was focused on the coronavirus battle and people were struggling in meeting day to day needs, not to mention the reduction in the use of vehicles during that period. Another plausible reason is that even though the subsidy was removed, the fuel pump price still remained relatively the same, and deregulating petroleum is off the table. This might just be a temporary glitch and the government means to

avoid any form of push back from the masses, one thing is sure, if the current price should spike by a great amount, Nigerians will definitely revolt as history has shown that a sharp increase in fuel pump price is not easily accepted by the masses.



April 2020

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1 Oil's (global oil markets) crash starts claiming victims (shale drillers, oil-sand miners, e.t.c) across the industry .	2 Saudi Arabia calls for an urgent meeting of OPEC+ following Trump phone call.	3 Putin to meet Russian producers ready to agree on oil cuts. Oil's surge continues as 10% global production cut gains traction.	4 Saudi, Russian blame game on collapse in oil prices stalls Monday's OPEC+ meeting.
5 Trump renews tariff threat on growing Saudi-Russian divide. Aramco delays oil pricing ahead of possible OPEC+ talks		7 Oil prices continue to climb as an output deal draws nearer. Exxon takes deep cuts in shale plays to cut spending by 30%.	8 Norway approves new wind farm to power offshore production platforms. Siemens and Uniper develop joint decarbonization plan for power generation	9 Saudi Arabia and Russia end their oil-price war with output cut agreement. Europe's largest solar power facility comes online as the industry faces coronavirus challenges	10 OPEC+ deal threatened as Mexico walks out, refusing to participate in cuts	11 Mexico accepts oil output deal, says Trump resolved its impasse with OPEC+.
12 Oil glut closes Middle East's largest crude terminal.		14 Collapsing demand pulls oil prices down despite cuts	15 As the pandemic bites, EDF lowers its nuclear output .	16 Oil slips below \$20/barrel as demand projections falls	17 Weak demand, diminishing storage pushes oil below \$19/	
19 Oil dives to a 21-year low on demand, storage concerns	20 WTI crude price goes negative for the first time in history.	21 Oil price collapse spreading as June WTI futures drop	22 Brent nears a 21-year low under demand and storage pressure	23 Kuwait's oil minister begins OPEC+ cuts ahead of time	24 Onshore drilling in the U.S. drops the most in 14 years	25 Saudis join 3 other OPEC+ nations in cutting output
	27 Oil slips below \$15/barrel as production cuts begin	28 Maxed-out capacity in South Korea intensifies scramble for oil storage	29 Oil prices rise as production cuts begin worldwide	30 Oil continues climb on signs of a coming demand recovery		

THE WRATH OF COVID-19

Bankruptcies, Diversifications and Stock Price Crashes.

The Coronavirus pandemic has disrupted a global economy, almost all sectors were affected by the outbreak of this global virus, the oil and gas industry is one of the sectors that has been affected the most as global oil demand plummeted to its lowest levels in years, not to talk of an oil price crash that will go down in history.

The oil industry has recorded a lot of bankruptcies and project abandonment ever since the outbreak and a lot of companies are beginning to reevaluate their long term goals by divesting and writing off some of their assets. Is it possible that oil is not as valuable as it was before?. Some say that the era of peak demand is closer than it has ever been in years, some say that it has already happened., while some choose to differ. The truth is we don't know, but one thing is sure, the coronavirus has done a lot of harm to the oil industry and in this article, we will show some trends.



By Owoeye Lolade

As the pandemic halted trains, planes, and automobiles, even the heads of big energy companies hinted at a turning point in the world's thirst for oil. The coronavirus pandemic has destroyed demand for gasoline and jet fuel as billions of people stay home, and there's no guarantee it will ever fully recover despite rock-bottom prices. Earlier, executives with the most aggressive forecasts had "peak oil" arriving in the late 2020s, while others anticipated it decades later. Now it is unclear whether the appetite for oil and the prices that went with it will ever return.

Much of the forecast growth in oil demand was based on people getting richer and wanting to fly more, yet jet-fuel demand has declined more than any other petroleum product as a result of the Covid-19 crisis. Boeing Co. Chief Executive Officer Dave Calhoun expects a three-year wait before passengers, wary of squeezing into airports and airplanes, make as many journeys as in 2019. At the same time, Tesla Inc. displaced Toyota Motor Corp. as the world's most valuable automaker in 2020, underscoring investor enthusiasm for a company betting on the future of electric vehicles and trying to transform an industry that has relied on internal combustion engines for more than 130 years.

The outbreak has disrupted supply chains dependent on diesel-guzzling trucks and ships burning heavy fuel oil. Politicians are now urging less reliance on long-distance transport and the World Trade Organization predicts trade will slump by at least 13% in 2020. Pre-virus, the push to ditch oil was gaining momentum from the 2015 Paris Agreement on climate change and a surge in green investment.

How oil-producing nations are adapting.

Saudi Arabia

The world's largest oil exporter, Saudi Arabia, plans to put up for privatization, state-held assets in the healthcare, education, and water utility sectors in order to raise money while its oil revenues have shrunk with the low oil prices and the crash in demand. The biggest asset sale that Saudi Arabia has made in recent years was the initial public offering

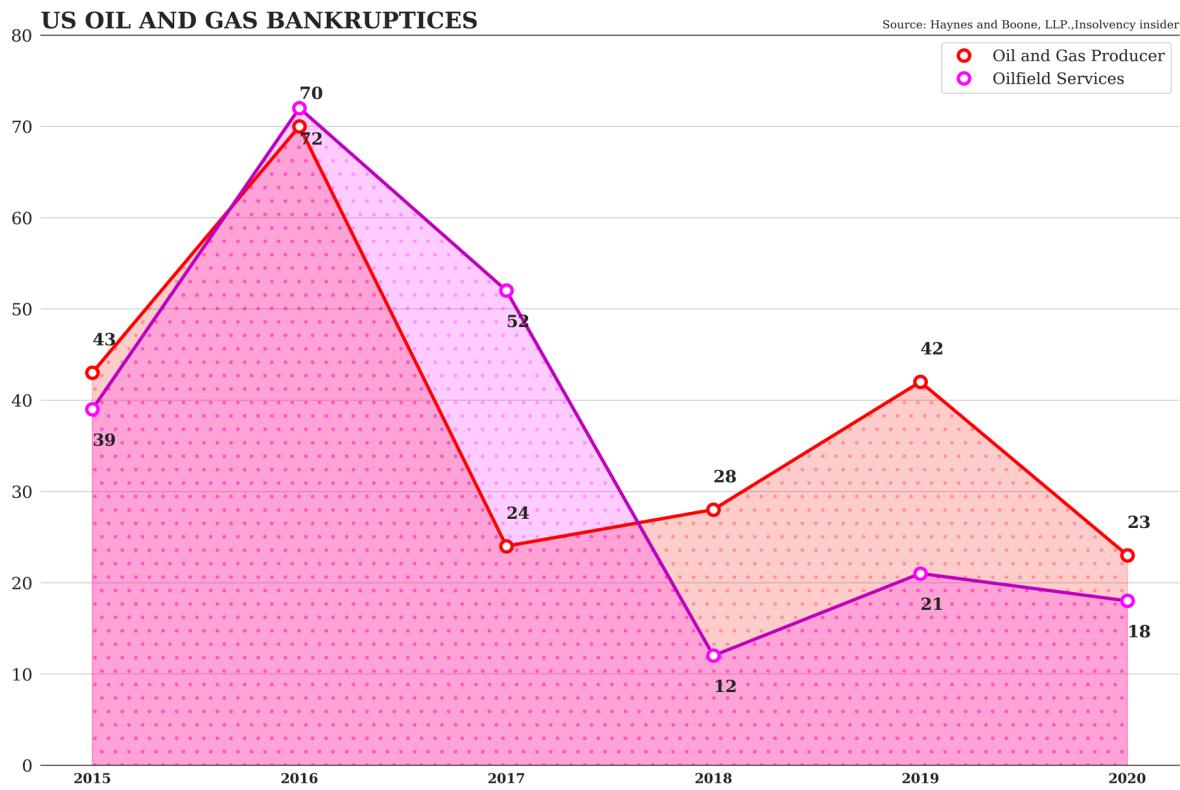
(IPO) of 1.5 percent of its oil giant Saudi Aramco in December 2019, with which the Kingdom received US\$29.4 billion.

Russia observation

Global investment in oil is set to plunge by one-third this year due to the coronavirus and its effect on economies and oil demand, Russia's Energy Minister Alexander Novak said at an online conference on Thursday. At the peak of the pandemic in April, global demand crashed by 25-28 percent, or by 28 million barrels per day (BPD), Novak said, noting that the new OPEC+ production cut agreement is helping the market rebalance. That balance, and even a deficit, could be reached this month, the Russian minister said. Novak's views on the market rebalancing and investments in the oil industry echo assessments of analysts and international organizations. The COVID-19 pandemic will result in the biggest annual drop in energy investments on record—nearly US\$400 billion, the International Energy Agency (IEA) said in its World Energy Investment 2020 report in May.

US Shale

"The shale industry was already under pressure, and investor confidence and access to capital have now dried up: investment in shale is anticipated to fall by 50% in 2020", the IEA said in its report. The slashed investments in the oil industry could lead to a tighter oil market than previously anticipated, according to the IEA. The US shale is known to not perform well under low oil prices. Similar to events that happened in 2016 where a lot of shale oil companies filed for bankruptcies. 2020 is not much different as records show significant growth in the number of companies that have filed for bankruptcy in just the first half of the year.



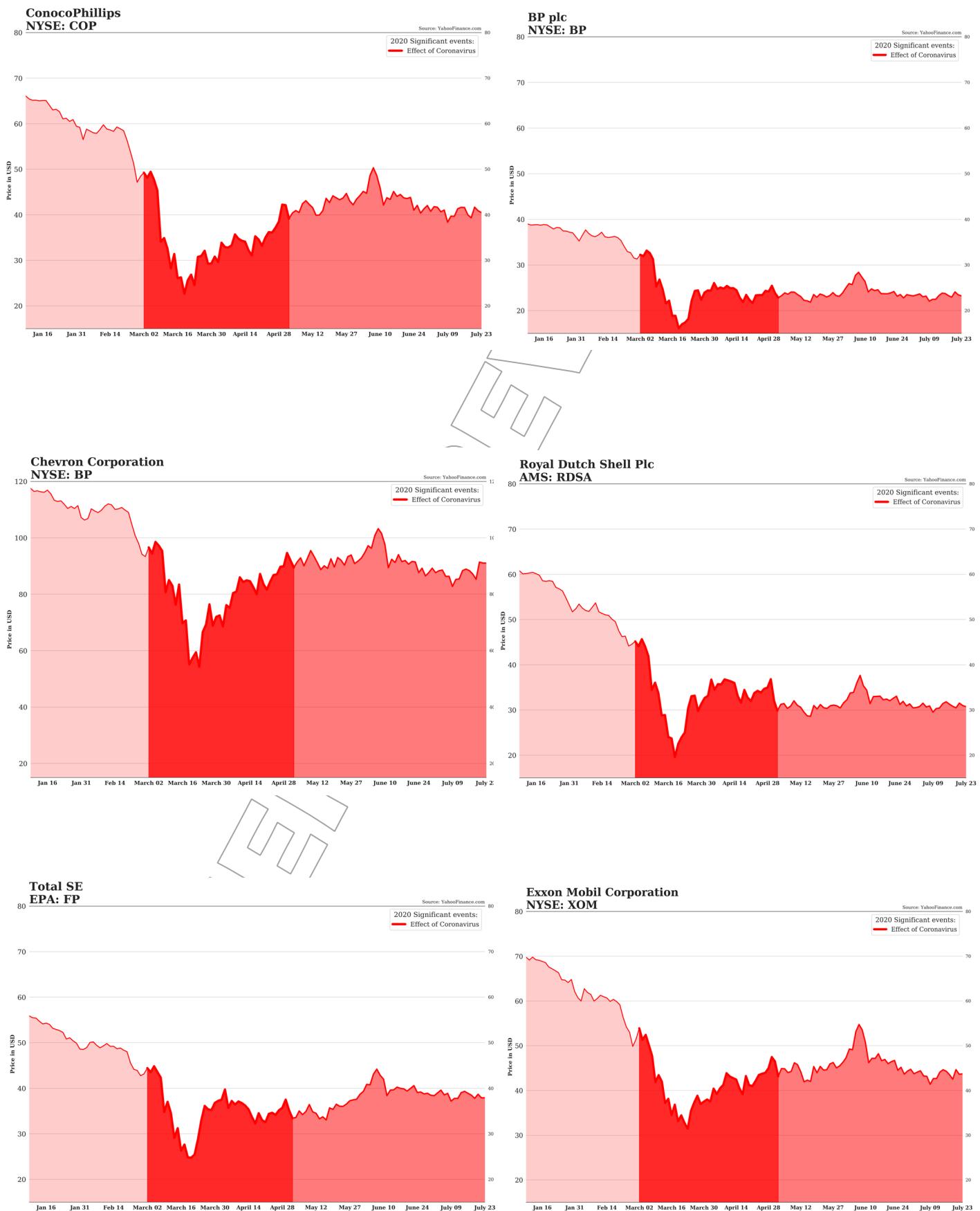
Impact on oil producers

The oil and gas sector will see the steepest decline in investment this year compared to last year, the IEA has estimated. Investment in oil and gas is set to plunge by US\$244.1 billion, or by nearly one-third, in 2020 compared to 2019. Energy companies are resetting their sights. Shell cut its dividend for the first time since World War II and BP Plc. said it would review projects against price forecasts that are 20% to 30% lower. Ryan Lance, chief executive officer of ConocoPhillips, said the U.S. may never return to the record 13 million barrels a day it produced early in 2020.

The oil industry is bracing for the effects of the crisis to linger. Employees keep working from home. International travel stays scarce. And citizens in once polluted cities, having become accustomed to blue skies, demand tougher emissions controls, encouraging governments to redouble efforts to tackle the climate crisis. Such changes would come on top of a push for investors to dump oil assets that had been

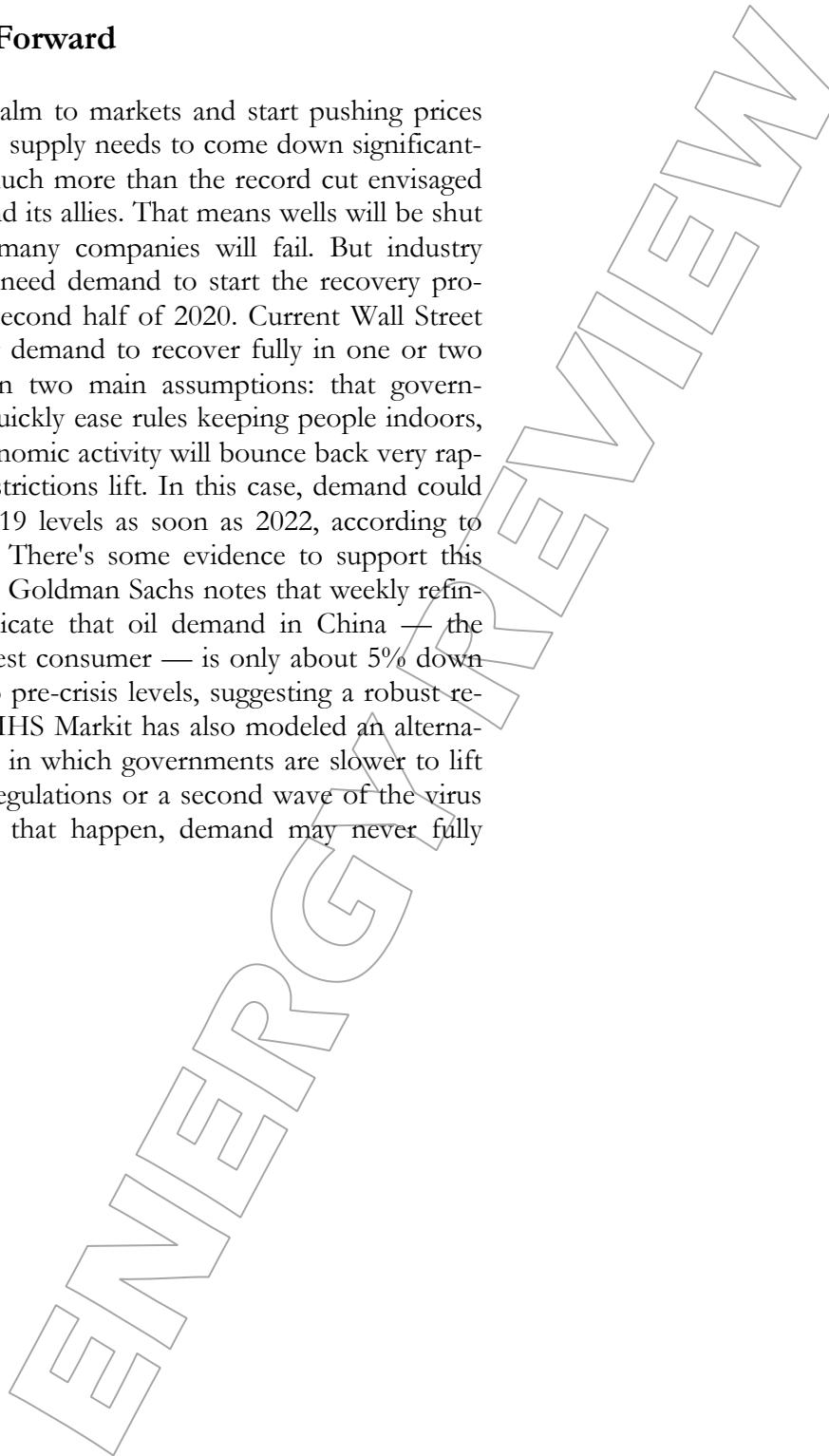
gaining momentum before the recent price crash. Sustainable energy investments, by comparison, appear to have held up relatively well despite stock market volatility. The threat of a second wave of infections in the fall also looms for producers. Prices have already plunged to their lowest levels in decades as producers grapple with excess supply and the worst demand shock in history. "There remains an exceptional level of uncertainty regarding the near-term outlook for prices and product demand," BP (BP) Chief Financial Officer Brian Gilvary told analysts this week. Before the pandemic, analysts predicted that the peak in oil demand would occur around 2040 due to the rise of electric cars, increased energy efficiency and a switch to alternative sources. But the coronavirus has forced many assumptions about the future of oil to be tossed out. The International Energy Agency expects global oil demand to fall by a record 9.3 million barrels per day in 2020, the result of efforts to contain the contagion in 187 countries and territories. The impact of the pandemic showed itself in the stock prices of oil companies.

Effects of Covid-19 in the oil and gas industry by Owoeye Lolade



The Way Forward

To restore calm to markets and start pushing prices higher again, supply needs to come down significantly, and by much more than the record cut envisaged by OPEC and its allies. That means wells will be shut down, and many companies will fail. But industry players also need demand to start the recovery process in the second half of 2020. Current Wall Street forecasts for demand to recover fully in one or two years rely on two main assumptions: that governments will quickly ease rules keeping people indoors, and that economic activity will bounce back very rapidly once restrictions lift. In this case, demand could return to 2019 levels as soon as 2022, according to IHS Markit. There's some evidence to support this upbeat view. Goldman Sachs notes that weekly refinery data indicate that oil demand in China — the world's biggest consumer — is only about 5% down compared to pre-crisis levels, suggesting a robust recovery. But IHS Markit has also modeled an alternative scenario in which governments are slower to lift quarantine regulations or a second wave of the virus hits. Should that happen, demand may never fully recover.



May 2020

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					Oil cuts by OPEC+, U.S. operators lead prices to a weekly gain.	
	4 Shell sells Appalachia shale gas assets for \$541 million	5 Total pledges to be carbon neutral by 2050.	6 Oil doubles over past five days on output cuts and stabilizing demand	7 Brent crude jumps as Saudis raise selling price worldwide.	8 Crashing oil demand drives a 17 million barrels per day global output cut in	9 U.S. drilling rig count lowest since 1975 as shale boom fades
11 Saudis add 1 million per barrel to output cut to help stabilize oil prices	11 Oil slips despite Saudi's pledge to increase production cuts	12 Oil storage crisis fading on global production cuts and recovering demand.	13 Equinor, SSE select Port of Tyne operations base for world's largest offshore wind farm	14 Saudis reducing oil exports to comply with OPEC+ output cuts.	15 Canadian offshore industry in crisis mode due to COVID-19 and the collapse of oil prices	
17 OPEC+ proves its mettle by swiftly delivering oil production cuts	18 Oil reaches highest since March as Chinese demand reaches 13 million barrels per day.	19 Brent nears \$35/barrel on growing demand and tightening supply	20 Total lands \$15 billion financing commitment for Mozambique LNG project	21 Oil passes \$34/bbl on shrinking American stockpiles	22 Oil prices slip as China projects lower fuel demand	22 Oil's capital city (Houston) goes green, signing renewables contract for all municipal facilities.
	25 IEA (International Energy Agency) chief says low oil prices will take demand beyond pre-crisis highs.	26 Maersk, Orsted and other Danish companies team up to produce sustainable fuels on a large scale.	27 Oil prices fall on Russia's readiness for pre-OPEC+ production levels. Ghana reconsiders oil's role in its economy as prices fall.	28 Oil prices continue to slide on growing U.S. stockpiles. Halliburton launches real-time wireless depth correlation system	29 Oil's biggest monthly advance ever stalls on U.S.-China tensions. Saudis focus oil shipments on China during production cuts	29 UK approves plan to develop the country's largest solar farm in the south of England

THE ENERGY TRANSITION

The Future of the Energy Industry



It is no more news that the Oil and Gas Sector is faced with too many challenges. These challenges if not addressed soon enough can lead to the extinction of some Oil companies. Big oil companies have started to transition towards a greener world.

There are so many issues relating to the energy transition that affects the dynamics of the Oil and Gas Industry, can you think of any? If you can't, no problem, allow us to take you through this journey where we will show you trends that if not managed carefully by the Oil and Gas sector can be the biggest threat that might just lead to the downfall of the sector.

By Paloma Peter-Dzoho

ENERGY TRANSITION

Traditionally, energy is produced by burning something, such as oil, gas, or coal, which has caused increased carbon emissions that are now a significant problem. Due to climate change concerns and global warming as well as several environmental risks, there is a need for a change in the energy systems that we have always known. To reduce carbon emissions, fossil fuels are being replaced with cleaner energy sources.

Relationship between Climate Change and Energy Transitions

Energy transition refers to the significant changes in the structure of an energy system. In the past, economic indicators like demand and supply of a fuel source determined and drove these changes. However, this current transition from fossil fuels to renewable energy is a result of the climate change and global carbon emissions concerns we discussed earlier.

This energy transition is also called the decarbonization of energy and is a move towards clean energy and sustainability. The global warming problem is the biggest challenge facing humans in the 21st century and solving this problem is a top priority all over the world. The earth has already exhausted its capacity to absorb greenhouse gas emissions.

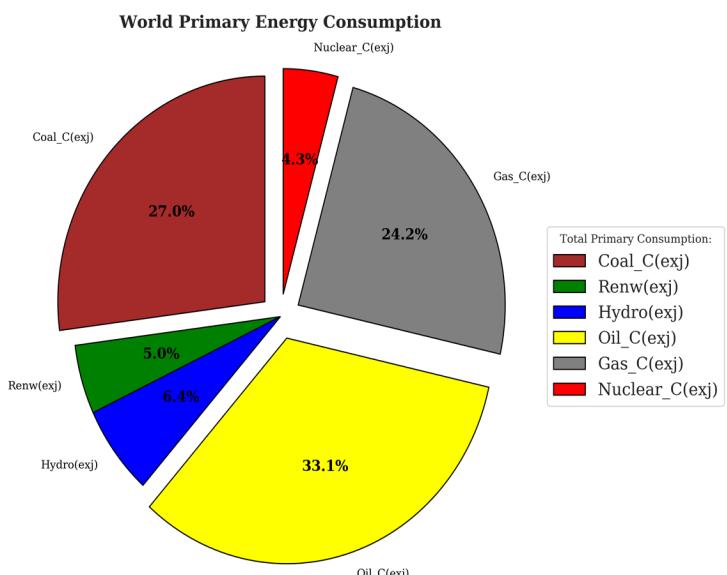
According to the Paris climate agreement, harmful gas emissions must cease by 2040 or 2050. There is a general recognition in recent times that fossil fuels are the largest source of carbon emissions. And energy systems have to change all over the world so fossil fuels can be replaced with cleaner energy sources.

Apart from carbon capture and sequestration, the only other ways to reach these goals are for us to transition away from fossil fuels which include, oil, natural gas, coal. This transition is towards nuclear power, and other renewable energy sources like wind, solar energy, hydro-power, geothermal, etc. and a transition is the only way to get to a point where balance is restored to the cycle.

Causes Global Carbon Emissions

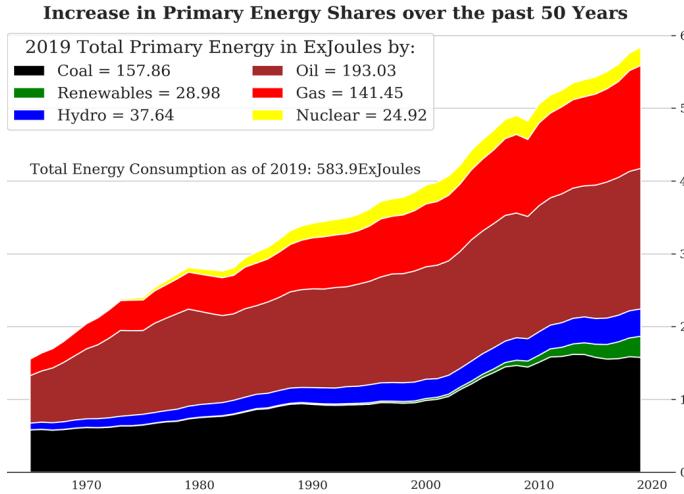
Global Carbon Emissions have been attributed to various causes, a large percentage goes to the Energy Industry, data collected over the years shows that there is a strong correlation between primary energy consumed and carbon emissions. There are 6 main primary sources of Energy namely:

- ◆ Oil,
- ◆ Natural gas,
- ◆ Coal,
- ◆ Renewables (Solar, Wind, biofuels),
- ◆ Hydroelectricity
- ◆ Nuclear.

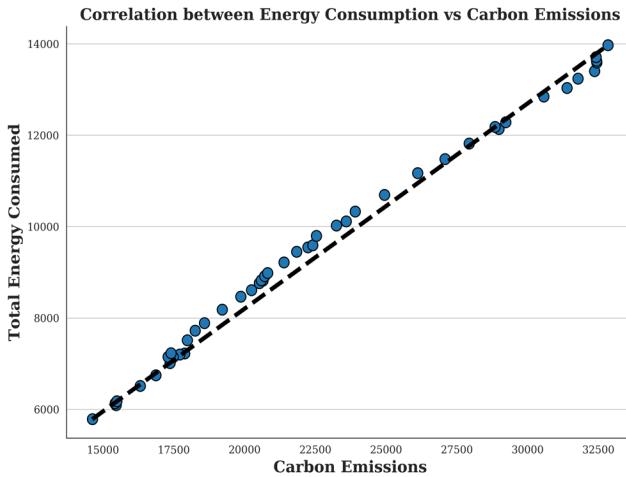


Oil tops the list as the most consumed primary energy followed by coal, natural gas, renewables, nuclear. The shares of these primary energies have increased steadily over the years with Renewables having the sharpest rise over the past ten years even though it still has a long way to catch up with the market shares captured by the Oil, gas, and coal.

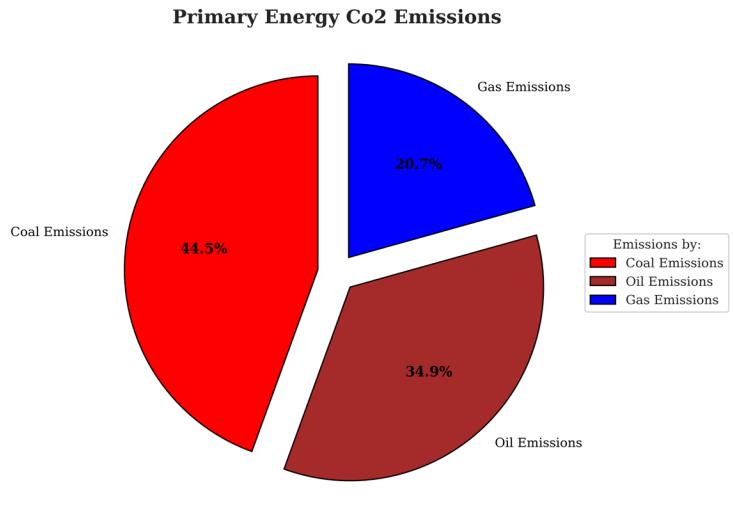
emitted, one can see a very strong correlation between the two, this by no means say that Energy consumed is the sole factor for the cause of the rise in Co₂ as other factors like deforestation, bush burning have also contributed their quota.



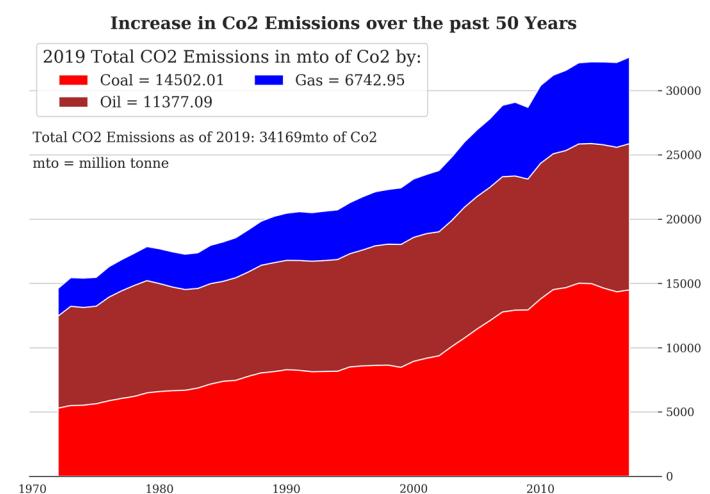
Out of these 6 main sources of energy, oil, gas, and coal are carbon sources of Energy while renewables, nuclear are non-carbon sources also known as zero-carbon sources.



A carbon energy source means that for every joule of energy consumed, an estimated amount of Co₂ is released into the atmosphere. The accumulation of these processes is what has led to the rise of Co₂ over the years. From the figure below, using the data obtained over the past 50 years of energy consumed and carbon

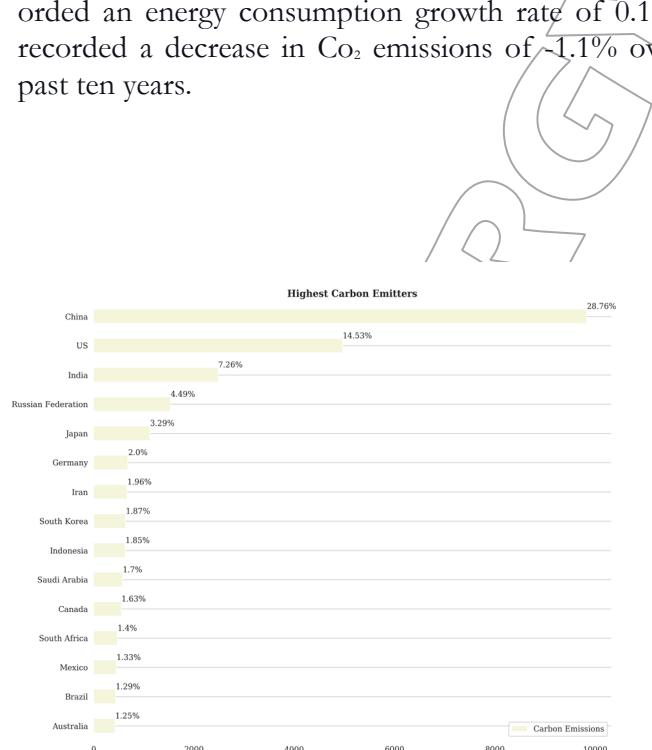


The fact that oil, coal, and gas (the three primary energy carbon sources) dominate the energy market gives a good reason why and how the energy industry can be placed in the middle of the climate change crisis. Carbon emissions just like primary energy Consumed has also increased over the past 50 years with coal constituting the largest share of carbon emission followed by oil and then gas.

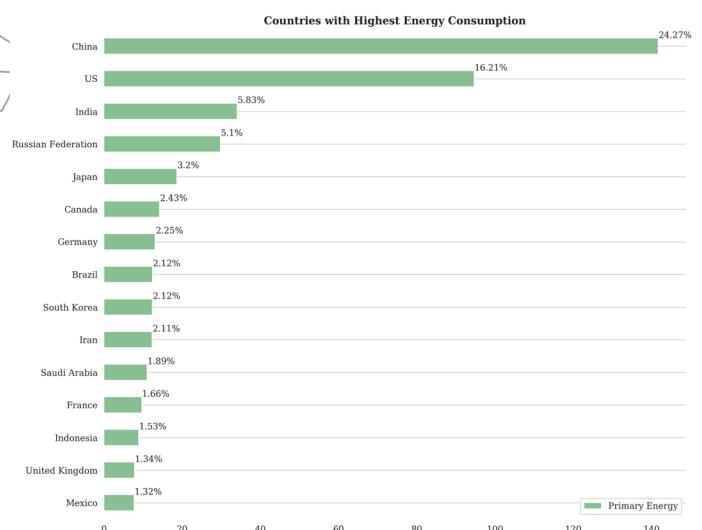


Countries are responsible for the largest shares of Carbon Emissions

To prove that carbon emissions are strongly correlated with Energy Consumption, countries like China, USA, Russia, India who are the largest consumers of energy are also known to be the biggest emitters of Co₂ with China leading both charts has the biggest consumer and the largest Co₂ emitter. China might be known as the world's highest emitter followed by the US, this is attributed to their rapid growth and development over the years, their population, and the number of industries present in these two nations. They both consume the highest amount of energy ranging from carbon sources to non-carbon sources. Over the past ten years, they have invested heavily in non-carbon sources of energy, and these have reduced their overdependence in oil, coal, and gas as the only primary energy but are yet to reduce their carbon footprint as they still top the charts. Over the past ten years, both countries have recorded a low growth in both Energy Consumption and Co₂ emissions with China having an energy consumption growth rate of 3.8% and Co₂ emission growth rate of 2.6% while the US recorded an energy consumption growth rate of 0.1% and recorded a decrease in Co₂ emissions of -1.1% over the past ten years.



Let us bring into light that there are other countries who do not consume a lot of energy like China and USA but over the past ten years have recorded higher energy consumption rates than the Top 5 Energy consuming nations, these same countries have been recorded to have the highest increase in Co₂ emissions over the past ten years, call these nations the developing countries that have been striving to grow their country economy by building more industries, factories, creating jobs but at the same time consuming more energy and emitting more Co₂ into the atmosphere.



There is a very strong relationship between the Energy consumed and Carbon emitters, of course, there are confounding variables that affect the relationship such as population, level of development, technology and many more that we might not know about but with the information above, we have been able to paint you a picture as to why Energy consumption is in the middle of the Climate change crisis.

Latest energy transition trends

In recent times there has been an increase in renewable energy generation, and consumption and these trends of continuous growth are not an accident. They are as a result of government support in the form of favorable policies, energy transition targets, and goals and funding.

Renewable energies are expanding in terms of technological advancements, geographical spread, and acceptance, and are transforming our global energy systems. Solar-Thermal and Photovoltaic plants are together auspicious and are predicted by IEA to be a significant source of electricity and meet most of the world's electricity demands by 2060. And other renewable energy sources like wind, biomass, and hydropower can meet the rest of our needs.

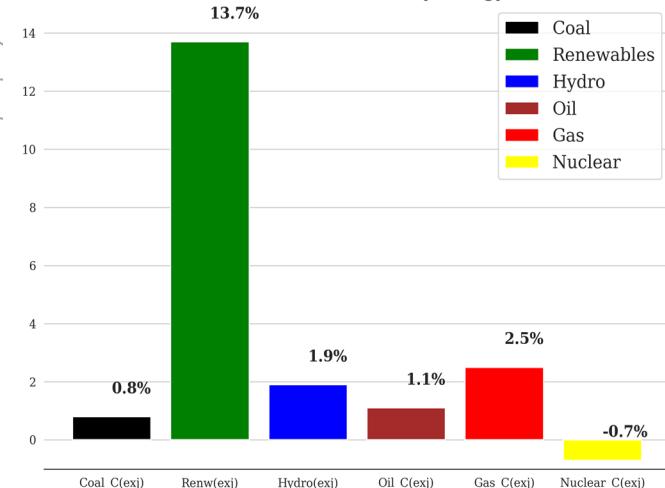
Renewable energy sources are also getting cheaper and cheaper at a fast rate. Technological change and innovations are causing cost reductions of technologies which are, in turn, creating investment opportunities. With many people involved, there is now market competition and mass production of renewable energy technologies.

This increase in affordability and efficiency and reduction in price will lead to an energy revolution similar to the one caused by computers. In as little as the next 30-40

years, the global energy mix is expected to be split equally between fossil and no fossil sources, although efforts are being made to achieve it much sooner. These goals if achieved will significantly reduce the global emissions of greenhouse gas.

More than just being sources of clean energy, renewables are solving many other problems. Such as creating jobs, improving energy security, reducing gender inequality, and reducing poverty. They are also reducing the impacts fossil fuels have on the environment and the health of workers and host communities.

10 Years % increase in Primary Energy Shares



Forecasted Co2 Emissions for different Energy Scenarios

Energy Scenarios:

- Evolving Transition □ Less Globalization
- More Energy ● Rapid Transition

Evolving Transition: A steady rise in the shares of Renewables

More Energy: More Energy is being consumed globally, this can be marked by an increase in Global Economic growth

Less Globalization: Lesser Energy is being consumed, this can be marked by lower economic growth

Rapid Transition: This scenario is marked by a sharp increase in Renewables shares

1970 1980 1990 2000 2010 2020 2030 2040

Source: BP Energy Outlook 2019

What do these trends mean for the Oil and Gas Industry?

The oil and gas industry is currently the most significant global energy supplier and plays a crucial role in meeting up with the current demands for energy. There is increasing pressure on oil and gas companies to transition due to social and environmental concerns, and they are still tasked with providing the needed energy which renewable energy cannot presently meet.

In a statement by Dr. Fatih Birol, the IEA Executive director, "No energy company will be unaffected by clean energy transitions. Every part of the industry needs to consider how to respond. Doing nothing is not an option". The oil and gas stakeholders have a problem and will have to balance their short term gains from concentrating on oil and gas production with investments in renewable energy. This investment will be significant in the long term and determine their relevance and even the keeping of their license.

The industry is vast and diverse, and so there is no single solution or response that will be applicable by all key players. The major oil companies also are known as Big Oil like Shell, BP, and Total are currently investing in renewables with plans to increase these investments in the coming years and ensure their sustainability.

How will National Oil Companies Respond to these trends?

Things are much different when it comes to National Oil Companies (NOCs), which account for more than half of global oil and gas reserves and production.

The NOCs are also either majorly owned or wholly owned by their national governments and decisions lie in the hands of the governments.

While there are some which are high performing, the majority of them are not correctly positioned to adapt to transitions and changes in global energy systems.

There will also be an impact on the geopolitical position of these countries, and they are set to make certain losses if the world fully transitions to renewable energy. These exporters of fossil fuels stand to lose their power while the positions of countries rich in renewable energy resources will be strengthened.

Is the Energy Transition feasible?

Several published forecasts have overestimated the potential of the new energy and conversion technologies. Another common trend is that such publications also underestimated the inertia that energy systems and infrastructure have. Historically, power plants operate for many decades once built and do not change easily.

For a speedy transition in the energy that meets the Paris climate change goals, the political, technological, and economic structures will need to change quickly.

In surveys of International public opinion show, there is strong support for different methods of addressing the current energy supply problem. Promoting renewable sources of energy, building infrastructure for renewable energy, and tax incentives and bonuses to encourage investment in renewables will help. Renewable energy investments are expected to pay off in the long run.

Countries riding on Green Investments

Government policies and leadership help renewable energy companies play on a level playing field and encourage investment in and acceptance of renewable energy technologies. Some western countries like Germany are way ahead by implementing innovative policies that have driven most of their renewable energy growth over the past decade.

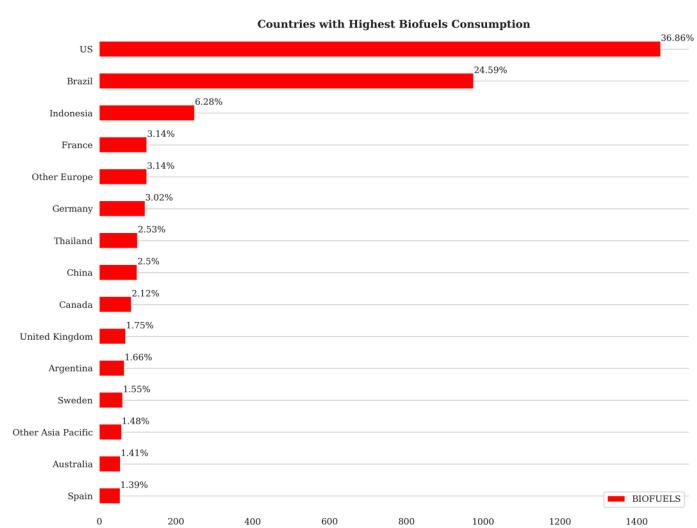
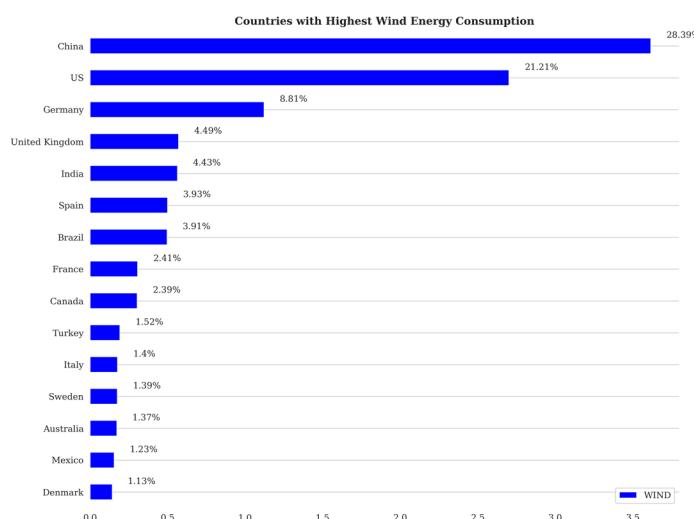
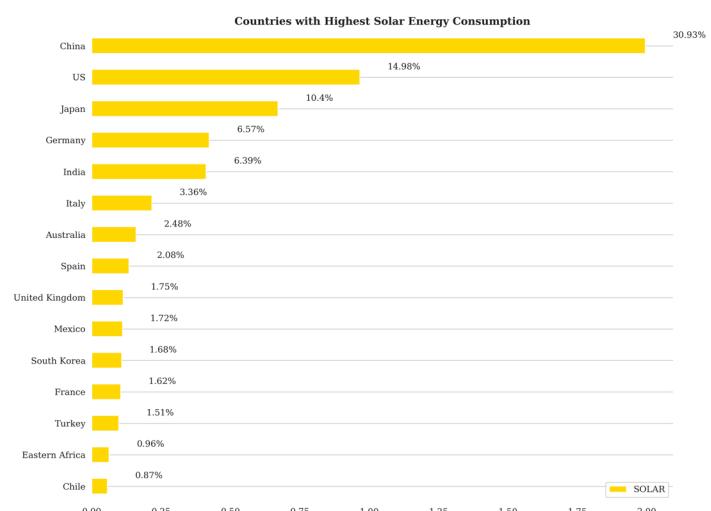
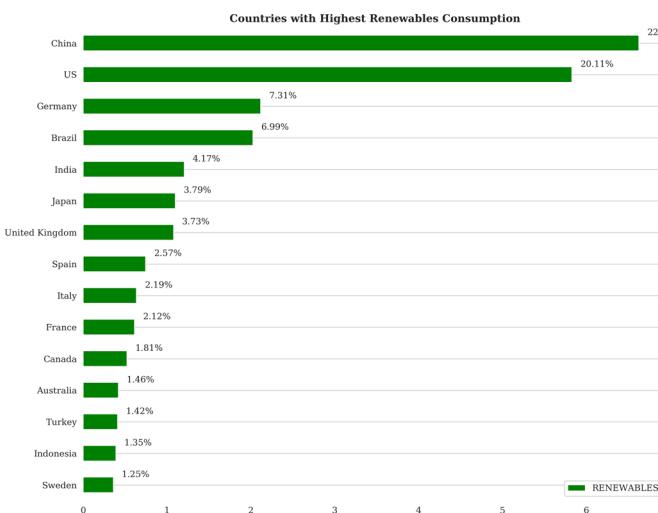
Germany has made a commitment to an energy mix of 60 percent Renewable energy and 40 percent non-renewables by 2050, and Denmark aims to achieve 100 percent renewable energy by 2050 also. Presently there are 144 countries worldwide with clear sustainable energy policy targets.

EU member countries have set and supported ambitious sustainability goals and are some of the top countries for

investment in renewable energy. The countries with the highest stakes in the past few years are Germany, the United States, China, Spain, Italy and Brazil. A significant benefit of this investment growth is an increase in Jobs which in turn reduces unemployment.

Let's take a look at countries that are leading the stakes in the renewables race.

Is there a pattern we should take note of? Well, take a look at the charts below.



Why African Countries will take a longer time to transition

From the charts on the previous page, did you notice how no Africa country was found in the top consumers of the various forms of renewable energy?

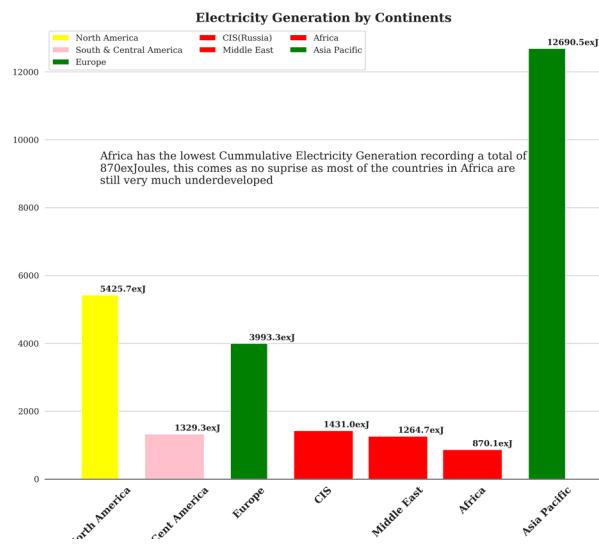
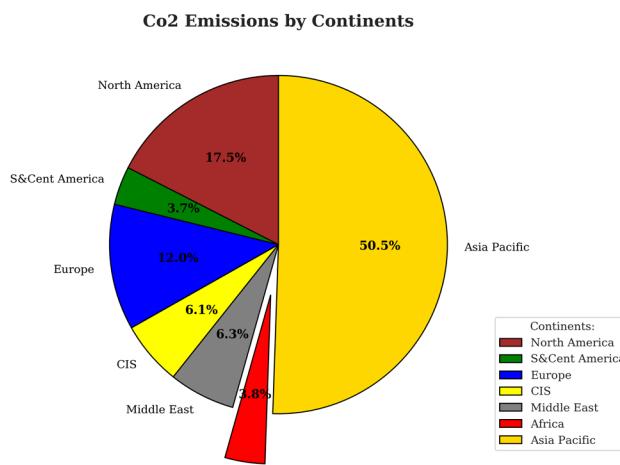
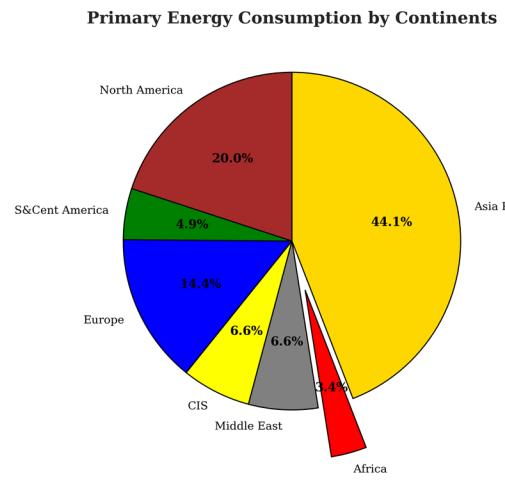
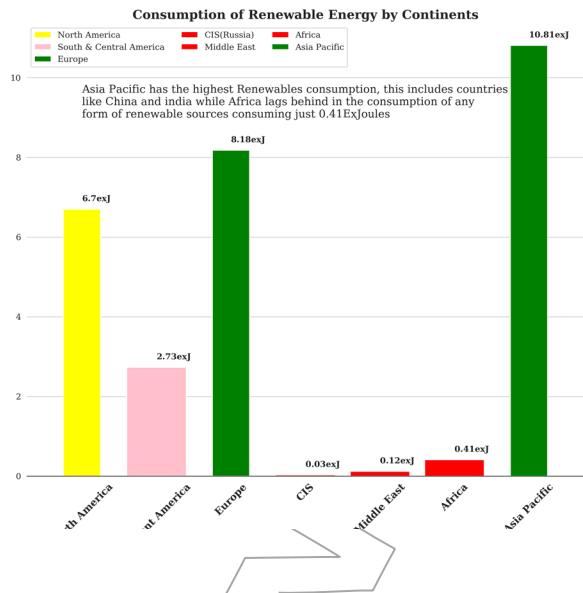
African countries are still largely dependent on oil, and their governments are making little to no plans of transitioning to renewable energy. Some reasons for this include lack of necessary funds to invest in sustainable energy for the future and still provide energy for their present needs.

Also, the majority of African countries have much bigger problems and are channeling their efforts and resources to tackle those problems instead. Recently, Nigerian Senator Ben Murray-Bruce was criticized and accused of having misplaced priorities by Nigerians for proposing an

electric car bill to promote the use of lean energy in Nigeria.

When countries are still battling poverty, lack of infrastructure and amenities, terrorism and hunger, and are even failing to meet their present energy needs, it is unlikely that they will focus on investing in renewable energy

The charts below show how underdeveloped Africa really is compared to other continents. The only positive feature is the lower carbon footprint Africa has, compared to others.

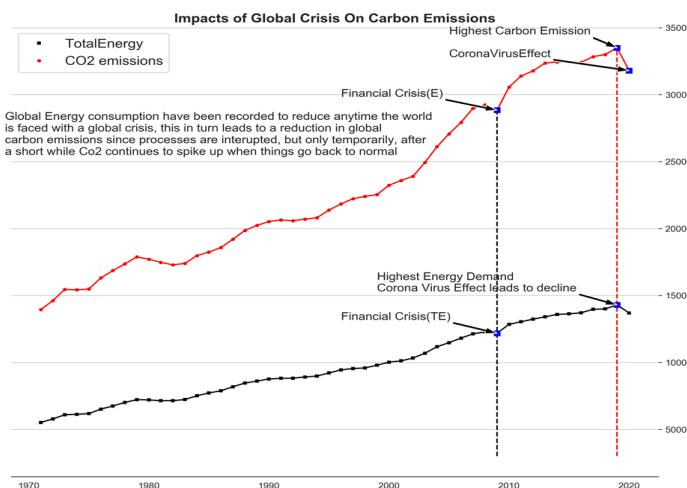


Effects of COVID-19 on Energy Transitions.

With schools, industries, and airlines shut down, we have seen a drop in the demand for both renewable and non-renewable energy. These recent happenings have considerably slowed down the progress of both carbon sources and non-carbon sources of energy and also reduced global carbon emission temporarily.

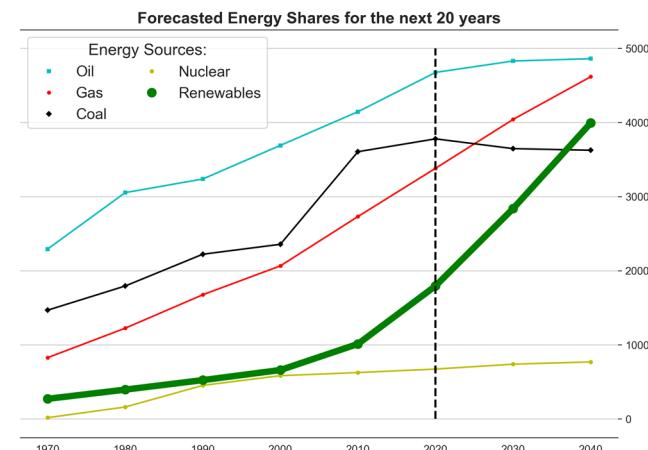
History has shown that global events tend to reduce energy demand, hence lower energy consumption which then leads to lower carbon emissions. This is the same scenario that played out with the Covid-19 outbreak, lockdown measures across the world led to a decrease in industrial activities, decrease in transportation, buildings and factories were forced to shut down, all these led to a decrease in the daily energy consumption thereby leading to a decrease in Co2 emissions. Co2 emissions were recorded to have reduced by 6.6% from the start of the year to May with the highest record of 17.4% recorded in April. The emissions have started increasing again and if not contained will return back to previous levels. This will be a slow and steady increase since a lot of economies around the world are still wary of the situation of things and yet to fully reopen all activities because they are trying to prevent a 2nd outbreak of the virus.

The chart below shows how energy consumption and carbon emissions have been affected by certain global events. The unit of measurement here is in Mtoe – Millions of tonnes of oil equivalent.



It is estimated that growth in renewables will be much slower due to the aftermath of the Covid-19 Virus. With supply chains disrupted by travel and importation embargoes, renewable technology creation is affected because a lot of its equipment is gotten from countries like China, Germany, and Denmark. Also, several countries are saying renewables are not essential and reducing renewables.

Renewable energy growth post-COVID will partly depend on government policies and the extent to which the government supports renewable energy companies. Because European countries with developed economies are in a better position to spread their investments and stimulate the renewable energy industries, we will likely see more growth in these countries. Unfortunately, many African countries do not have the resources to support such investments, and renewables growth will be less in them.

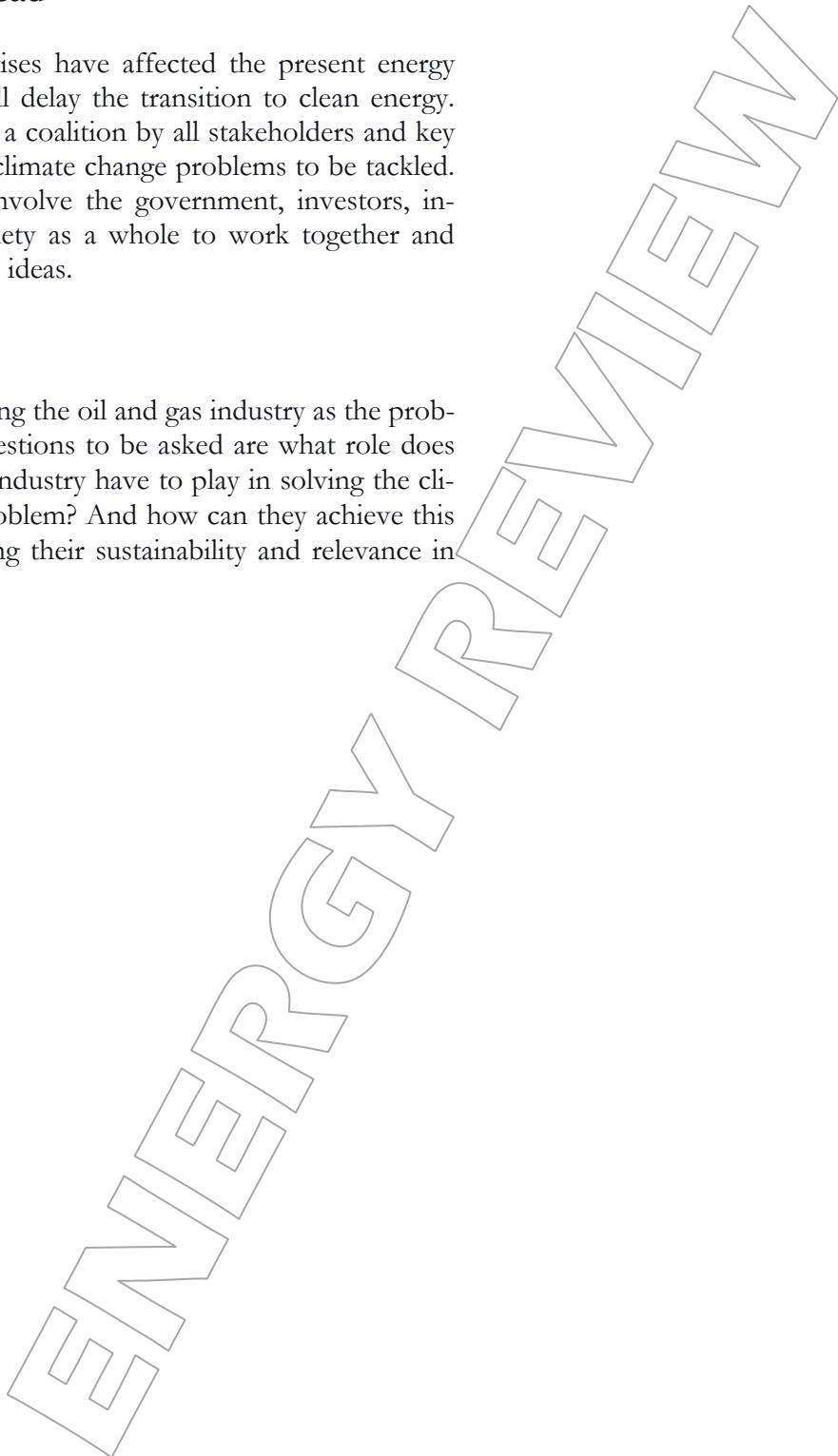


Source: BP Energy Outlook 2019

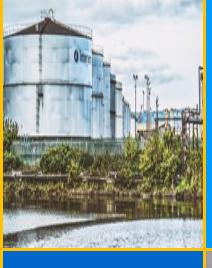
The Way Ahead

The COVID crises have affected the present energy demand and will delay the transition to clean energy. There has to be a coalition by all stakeholders and key players for our climate change problems to be tackled. And it would involve the government, investors, industry, and society as a whole to work together and share innovative ideas.

Instead of viewing the oil and gas industry as the problem, the key questions to be asked are what role does the oil and gas industry have to play in solving the climate change problem? And how can they achieve this while maintaining their sustainability and relevance in the long run?



June 2020

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1 Oil prices move lower as U.S.-China tensions weigh	2 Oil prices climb as OPEC+ considers production cut extension	3 Shale's reawakening begins as oil holds above \$30	4 Oil price slide continues on OPEC+ strife, questionable demand data	5 Wind turbine inventor sets sights on high-power deep-water renewables	5 OPEC and allies agree to extend record oil production cut
7 Nigeria commits to new OPEC+ targets after earlier non-compliance. Saudis boost crude export prices to support OPEC+ efforts.	8 BP to dismiss 10,000 employees as part of carbon reduction plan. Second Libyan oil field restarts, potentially complicating the deal of OPEC+	9 U.S. to cut off Iran-Venezuela trade by sanctioning oil tankers The U.K. will soon be home to its first consumer-owned wind farm.	10 Growing U.S. oil inventories push oil prices below \$38/barrel.	11 Putin's anger over environmental damage may drive modern reforms.	12 Venezuela's fall leaves world's richest oil reserves tapped by a single rig	12 Fear of U.S. Corona virus resurgence drives oil prices to first weekly drop since April.
15 Oil prices climb as fears build of a coming supply squeeze	15 Global EV (Electric Vehicle) market expands despite COVID-19.	16 Oil jumps 3% on supply cuts, improving demand	17 After a record April, U.S. imports of Saudi oil near 35-year low in June.	18 Rystad Predicts Massive Plunge in Libyan, Nigerian Reserves	19 OPEC+ and Iraq come to terms on cheating, strengthening the deal	
21 Oil prices continue their rise, albeit slowly, since April's crash	22 Deloitte says shale industry will be rocked by \$300 billion in losses and a wave of bankruptcies,	23 U.S. solar firm connects more villages to 'mini-grids' in Nigeria, Kenya.	24 Oil prices slip below \$40 on higher crude inventory projections	25 For first time ever, majority of shareholders push Chevron to align with Paris climate pact		27 Amazon.com Inc. to invest \$2 billion in "sustainable and decarbonizing technologies"
28 Coronavirus resurgence slows China's demand for U.S. crude	28 Pipeline vandalism in Nigeria down by 47% according to the NNPC.					

APPENDIX

API gravity - The American Petroleum Institute gravity, or API gravity, is a measure of how heavy or light a petroleum liquid is compared to water.

Benchmark- Benchmark crude oil is the petroleum that serves as a pricing reference for other types of oil and oil-based securities.

Brent- Brent is the leading global price benchmark for Atlantic basin crude oils. It is used to set the price of two-thirds of the world's internationally traded crude oil supplies.

Carbon capture and sequestration -Carbon sequestration is the process of capturing and storing atmospheric carbon dioxide.

Climate change- Climate change describes a change in the average conditions — such as temperature and rainfall in a region over a long period of time.

Deregulation- Deregulation is the process of complete removal of government regulations or control on an industry, especially with regard to pricing of products.

Embargo - An embargo is the partial or complete prohibition of commerce and trade with a particular country/state or a group of countries.

Fuel Price Modulation - Fuel Price modulation means that government will ensure initial slow price increases by regulating the components of fuel price such as taxes, freight, margins, transport, storage and bridging.

Futures contract- An oil futures contract is an agreement to buy or sell a certain number of barrels set amount of oil at a predetermined price, on a pre-determined date.

GHG- Greenhouse gas usually referred to as GHG, is any gas that has the property of absorbing infrared radiation (net heat energy) emitted from Earth's surface and re radiating it back to Earth's surface.

Global Warming - Global warming is the unusually rapid increase in Earth's average surface temperature over the past century primarily due to the greenhouse gases released by people burning fossil fuels.

Market Price - Market price in the petroleum industry is the unique price at which buyers and sellers agree to trade crude in an open market at a particular time.

Over-the-counter sales - Over the counter sales also known as OTC occurs directly between two counter parties outside the frame work of an established commodity exchange.

Paris climate agreement - Paris climate agreement is a landmark agreement that was adopted by almost every nation to combat climate change and to accelerate and intensify the actions and investments needed for a sustainable low carbon future.

PPPRA- The Petroleum Products Pricing Regulatory Agency (PPPRA) is an agency of the government of Nigeria established in 2003 to among other responsibilities, monitor and regulate the supply and distribution, and determine the prices of petroleum products in Nigeria.

Spot oil prices- Spot oil prices is the price traders pay for immediate delivery of a specific quantity of oil at a specific location.

WTI- West Texas Intermediate (WTI) is a crude oil that serves as one of the main global oil benchmarks. It is sourced primarily from Texas and is one of the highest quality oils in the world, which is easy to refine.

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