

The truth about big oil and climate change



IN AMERICA, THE world's largest economy and its second biggest polluter, climate change is becoming hard to ignore. Extreme weather has grown more frequent. In November wildfires scorched California; last week Chicago was colder than parts of Mars. Scientists are sounding the alarm more urgently and people have noticed—73% of Americans polled by Yale University late last year said that climate change is real. The left of the Democratic Party wants to put a “Green New Deal” at the heart of the election in 2020. As expectations shift, the private sector is showing signs of adapting. Last year around 20 coal mines shut. Fund managers are prodding firms to become greener. Warren Buffett, no sucker for fads, is staking \$30bn on clean energy and Elon Musk plans to fill America's highways with electric cars.

Yet amid the clamour is a single, jarring truth. Demand for oil is rising and the energy industry, in America and globally, is planning multi-trillion-dollar investments to satisfy it. No firm embodies this strategy better than

ExxonMobil, the giant that rivals admire and green activists love to hate. As our briefing explains, it plans to pump 25% more oil and gas in 2025 than in 2017. If the rest of the industry pursues even modest growth, the consequence for the climate could be disastrous.

ExxonMobil shows that the market cannot solve climate change by itself. Muscular government action is needed. Contrary to the fears of many Republicans (and hopes of some Democrats), that need not involve a bloated role for the state.

For much of the 20th century, the five oil majors—Chevron, ExxonMobil, Royal Dutch Shell, BP and Total—had more clout than some small countries. Although the majors' power has waned, they still account for 10% of global oil and gas output and 16% of upstream investment. They set the tone for smaller, privately owned energy firms (which control another quarter of investment). And millions of pensioners and other savers rely on their profits. Of the 20 firms paying the biggest dividends in Europe and America, four are majors.

In 2000 BP promised to go “beyond petroleum” and, on the face of it, the majors have indeed changed. All say that they support the Paris agreement to limit climate change and all are investing in renewables such as solar. Shell recently said that it would curb emissions from its products. Yet ultimately you should judge companies by what they do, not what they say.

According to ExxonMobil, global oil and gas demand will rise by 13% by 2030. All of the majors, not just ExxonMobil, are expected to expand their output. Far from mothballing all their gasfields and gushers, the industry is investing in upstream projects from Texan shale to high-tech deep-water wells. Oil companies, directly and through trade groups, lobby against measures that would limit emissions. The trouble is that, according to an assessment by the IPCC, an intergovernmental climate-science body, oil and gas production needs to fall by about 20% by 2030 and by about 55% by 2050,

in order to stop the Earth's temperature rising by more than 1.5°C above its pre-industrial level.

It would be wrong to conclude that the energy firms must therefore be evil. They are responding to incentives set by society. The financial returns from oil are higher than those from renewables. For now, worldwide demand for oil is growing by 1-2% a year, similar to the average over the past five decades—and the typical major derives a minority of its stockmarket value from profits it will make after 2030. However much the majors are vilified by climate warriors, many of whom drive cars and take planes, it is not just legal for them to maximise profits, it is also a requirement that shareholders can enforce.

Some hope that the oil companies will gradually head in a new direction, but that looks optimistic. It would be rash to rely on brilliant innovations to save the day. Global investment in renewables, at \$300bn a year, is dwarfed by what is being committed to fossil fuels. Even in the car industry, where scores of electric models are being launched, around 85% of vehicles are still expected to use internal-combustion engines in 2030.

So, too, the boom in ethical investing. Funds with \$32trn of assets have joined to put pressure on the world's biggest emitters. Fund managers, facing a collapse in their traditional business, are glad to sell green products which, helpfully, come with higher fees. But few big investment groups have dumped the shares of big energy firms. Despite much publicity, oil companies' recent commitments to green investors remain modest.

And do not expect much from the courts. Lawyers are bringing waves of actions accusing oil firms of everything from misleading the public to being liable for rising sea levels. Some think oil firms will suffer the same fate as tobacco firms, which faced huge settlements in the 1990s. They forget

that big tobacco is still in business. In June a federal judge in California ruled that climate change was a matter for Congress and diplomacy, not judges.

The next 15 years will be critical for climate change. If innovators, investors, the courts and corporate self-interest cannot curb fossil fuels, then the burden must fall on the political system. In 2017 America said it would withdraw from the Paris agreement and the Trump administration has tried to resurrect the coal industry. Even so, climate could yet enter the political mainstream and win cross-party appeal. Polls suggest that moderate and younger Republicans care. A recent pledge by dozens of prominent economists spanned the partisan divide.

The key will be to show centrist voters that cutting emissions is practical and will not leave them much worse off. Although the Democrats' emerging Green New Deal raises awareness, it almost certainly fails this test as it is based on a massive expansion of government spending and central planning (see Free exchange). The best policy, in America and beyond, is to tax carbon emissions, which ExxonMobil backs. The *gilets jaunes* in France show how hard that will be. Work will be needed on designing policies that can command popular support by giving the cash raised back to the public in the form of offsetting tax cuts. The fossil-fuel industry would get smaller, government would not get bigger and businesses would be free to adapt as they see fit—including, even, ExxonMobil.

ExxonMobil's drilling in

context



As ExxonMobil approaches the end its drilling campaign, rumours about the results abounded this week as have the extravagance of some of the claims. So let's put what we know in context. What I present below is based on information, seismic data, satellite data, even hearsay, but we all need to be mindful that so far ExxonMobil has not made any announcements.

It appears that Delphine has not struck commercial quantities of gas, but it is likely to have encountered gas presence. Even though disappointing, given expectations, this does not mean that there is no gas in the reservoir. This can only be ascertained by evaluating the results from Delphine and potentially carrying out further drilling in the vicinity of this target. Seismic and satellite data show a strong potential for a substantial gas reservoir at this location. We need to wait and see what ExxonMobil announces.

The positive news is that there appears to be a gas discovery at Glafcos, but there are no indications of quantities, commerciality, etc. In fact, it appears that the target was penetrated only recently and there is some way to go before drilling of the complete reservoir column is completed. This will probably happen over the next week or so. Just to remind ourselves, the gas-bearing column at Zohr was about 630m deep. ExxonMobil will need to completely penetrate the reservoir in order to obtain the data required to evaluate its gas potential.

Despite articles to that effect, it is not likely that drilling has encountered oil. ExxonMobil's programme was not only designed on the basis of drilling for gas, but oil deposits, if any, would be at much greater depths, over 6000m below seabed level, in comparison to gas reservoirs which are at about 3500-4000m below seabed level. In any case, gas reservoirs overlay oil. Oil does not come into it at present.

What's next

On completion of this drilling campaign ExxonMobil will probably spent time evaluating the results before it makes any announcements. This may take a few weeks, with any results expected to be released towards the end of February, and I will not be surprised if this is delayed to early March. It all depends on the complexity of the results from both Delphine and Glafcos.

As is usual with frontier type drilling, which is the case here, ExxonMobil will then follow completion of this drilling phase with evaluation of the results, and any other data available in and around block 10, and recalibration of its geological model before deciding how to proceed next. Certainly block 10 contains other potential drilling targets, not just Delphine and Glafcos. There is the much bigger Anthea and more. There may also be wider interest around block 10.

What is encouraging for Cyprus is that in ExxonMobil, Shell, Total and ENI we have some of the biggest international oil companies (IOCs) exploring in our EEZ. We also have Noble Energy that started this back in 2008. Moreover these companies cooperate with each other and share information they gain from their exploration activities, seismic campaigns and drilling, and geological models, thus maximising benefits and potential value of this data.

I hope that this process will show sufficiently encouraging results for ExxonMobil to continue with plans for further drilling at some future date. But make no mistake. With ExxonMobil's global exploration interests, and very possibly other more promising areas getting a higher priority, this process may take time, even years, not just a few months.

But there are also risks that we should be aware of. Should the results be disappointing and ExxonMobil decides to abandon its interest in block 10, this could have knock-on effects on the future of further exploration in Cyprus' EEZ. Based on seismic data, block 10 is the most promising of all licensed blocks. Disappointing results would reduce the likelihood of future significant discoveries and thus impact interest. However, based on what we know so far, I would like to hope that this is an unlikely outcome.

Timing

In one of the articles published recently, it was claimed that the recent two-month extension to the liquefied natural gas (LNG) import terminal tender by the natural gas public company (Defa) is linked to a hope for gas discoveries at Glafcos and Delphine. The tender specifies that the LNG terminal should become operational within 2020, in order to avoid serious penalties from the EU due to the use of heavy fuel oil and the high levels of carbon emissions.

Even if a substantial discovery were to be made by ExxonMobil, it could not impact timing of the LNG import terminal.

Such a discovery would need to be followed by appraisal drilling to confirm gas volumes, requiring at least another year. It would then take another two years to reach a final investment decision and 3-4 years to construct the facilities. That would take us to 2025-2026 at the earliest.

There is no way that Defa's LNG project could wait that long! However, with the sale of Aphrodite gas to Shell's Idku LNG plant in Egypt reportedly getting closer, it would make sense to plan to build a small diameter pipeline to bring gas from Aphrodite for Cyprus' needs. Even if the price of gas at the platform is \$4/mmbtu, which is very high, the total cost of gas delivered to EAC using such a pipeline would be about \$6/mmbtu. This is substantially lower than the \$10-\$12/mmbtu that the gas from the LNG project would cost EAC.

The latter would lead to an increase in the cost of electricity. The former would lead to a substantial reduction. Should the Aphrodite gas sale be completed, and we will know soon, this option must be considered seriously.

What is the goal

Going back to block 10 drilling, ExxonMobil is looking for substantial quantities of gas, not just from one gas-field but likely several, to support its ultimate plan to build a liquefaction plant in Cyprus for LNG exports. Commercial viability improves with the number of liquefaction trains. Two or three such trains, with a capacity of 5 million tonnes/yr each, will require gas quantities of the order of 15 trillion cubic feet (tcf).

That is the ultimate goal. And even then, success will depend on global markets and prices. These are not getting any easier as time passes. The relentless increase in renewable energy and shale gas mean that competition to secure a share of the global gas market is increasing.

We should not be disheartened if the results from this drilling campaign are not conclusive. But equally we should

temper our expectations. Global gas markets are challenging and it takes time to get greenfield projects off the ground. However, if we were to discover the quantities of gas required to progress into major export projects, ExxonMobil, Shell, Total and ENI are some of the most capable companies to achieve this.

China LNG imports in Jan rise to another record amid high stocks



Reuters/Singapore

China's imports of liquefied natural gas (LNG) rose to another monthly record in January, even as the country grapples with high gas inventories amid a warmer-than-usual winter,

according to shipping data and industry sources.

The world's second-largest LNG importer took 6.55mn tonnes of LNG in January, beating the previous record hit in December by nearly 2%, according to Refinitiv Eikon shipping data.

China's imports last year surged 41% from 2017 after gas shortages the previous winter prompted Chinese companies to stock up on supplies and pre-order cargoes, with Beijing continuing to push millions of households to switch to gas from coal for heating.

But the import growth is not wholly due to a rise in demand, said an industry source familiar with the Chinese market.

"When people see these numbers, they think Chinese demand is up... but actually it is causing a headache (for importers) as (they) have overbought and can't find demand to absorb the cargoes," the source said, declining to be identified as he was not authorised to speak with media.

China National Offshore Oil Corp (CN00C) resold at least one LNG cargo in January and possibly another, an unusual move during what is typically a peak demand period and highlighting this year's warmer weather, industry sources said.

Chinese traders are offering LNG cargoes to international buyers or selling into their domestic market at lower-than-expected prices, the first source said. The Lunar New Year holiday has also made the situation worse because factories are shutdown for at least a week, he said.

Wholesale LNG from small, land-based liquefaction plants fell to 3,500-3,950 yuan (\$519-\$586) a tonne on February 2, less than half levels of last year, according to Chinese gas-price monitoring agency yeslng.com.

Quotes at receiving terminals in East China's Shandong and North China's Tianjin last stood at 4,500 yuan (\$667) a tonne, down 17% and 5%, respectively, from late November, shortly after heating season started.

China's gas demand growth should decelerate from the past two years, said James Taverner of energy consultancy IHS Markit.

"Coal-to-gas switching mandates are moderating due to... security of supply concerns, and weakening economic growth,"

Taverner said.

There is also limited capacity in North China for further LNG ramp-up after big increases the past two years, he said. Trade tensions between the United States and China have also tightened financial conditions, dragging China's growth last year to its weakest in 28 years.

Siemens-Alstom's expected EU veto unleashes political backlash

The Siemens logo, consisting of the word "SIEMENS" in a bold, teal-colored, sans-serif font.The Alstom logo, consisting of the word "ALSTOM" in a bold, blue, sans-serif font, with a red circular graphic element integrated into the letter "O".

When Siemens AG and Alstom SA unveiled their rail merger in 2017, the former archrivals hailed the deal as a historic union, forming the basis of a European champion with the heft to take on an expansionist Chinese competitor.

The plan may well go down in history books, but not for the reasons the companies hoped.

Rather, the European Commission's likely rejection of the

merger on antitrust grounds is generating a political backlash in Paris and Berlin against Europe's independent competition regulator.

French Finance Minister Bruno Le Maire has called for an overhaul of policy to make it easier for the region's companies to grow and take on aggressive Chinese rivals. German Chancellor Angela Merkel has also talked of loosening EU rules.

Le Maire raised his rhetoric last week when Competition Commissioner Margarethe Vestager got the backing of member-country regulators to block the deal

A formal decision may come as soon as this week.

"Alstom and Siemens are symbols of French and German industry," said Marc Iveldi, a professor at the Toulouse School of Economics who studies competition issues.

"The case won't be forgotten and there will likely be consequences."

At the heart of the controversy is a fundamental disagreement over the role of Brussels in European business. On one side of the issue are powerful European officials like Vestager, who see themselves as umpires calling balls and strikes with a view of protecting consumers.

On the other are politicians, who fear rigid EU attitudes are hobbling Europe's top corporate players from forming ever-larger combinations.

Vestager came under unprecedented political pressure to approve the tie-up. This has raised alarm bells that a move is on to rewrite the region's laws in the face of mounting global protectionism.

"We should worry," said John Fingleton, a consultant and former head of the U.K. and Irish competition authorities.

“The political independence of mergers is under attack everywhere.”

The European Commission’s antitrust watchdog is one of the most feared on the planet and has regularly wrung hefty concessions from companies seeking mega-mergers by forcing them to sell off prized assets. Other would-be dealmakers have chosen to abandon transactions instead.

“The mission of the EU regulator isn’t industrial policy but to ensure fair competition. It’s looking out for the interests of consumers,” said Sarah Guillou, an economist at SciencesPo in Paris.

Yet within Europe’s biggest trading partners, strategic bulking up is underway. Some of the most valuable U.S. companies, from Microsoft Corp. and Alphabet Inc. to JPMorgan Chase & Co., have used M&A to expand over past decades.

The Chinese government has been busy playing matchmaker to transportation, technology and other businesses to spawn giants, including CRRC in 2015.

The EU’s focus on enforcing merger rules at home risks doing “everything wrong” for businesses to succeed globally, Siemens Chief Executive Officer Joe Kaeser said in defending his rail deal.

European merger rules have been in place for nearly three decades.

The competition division looks at the threat deals pose to market share, prices and innovation. Companies can assuage concerns with remedies like asset sales, but its decisions are most often waved through by the EU’s top political brass.

The EU argued that the Siemens-Alstom deal could come at a huge cost to customers in Europe. Chinese suppliers weren’t likely to enter the region in the near future and the tie-up

could lead to “high prices, less choice and less innovation.”

“We’ve spent last the 20 years dismantling monopolies in telecoms and energy and in other areas built up to be national champions,” said Fingleton, the former regulator. “We should learn from that.”

France’s Europe affairs minister said Sunday the bloc’s competition rules were absurd and needed to be overhauled, citing the difficulties Alstom and Siemens are facing over their planned rail business merger.

“I’m not criticizing the [European] Commission for applying the rules ... But these rules are absurd and were set up in the 20th century and we’re in 2019,” Nathalie Loiseau told LCI television.

A green new deal for Europe



By Massimiliano Santini And Fabrizio Tassinari /Florence

Jim Yong Kim abruptly resigned from his post as World Bank president recently, leaving a pillar of the international financial order without leadership or direction. Kim will join a private equity firm, where he believes he can “make the largest impact on major global issues like climate change.”

True, the private sector has an important role to play in mobilising funds for upgrading business models to address the threat posed by climate change. But governments and multilateral institutions remain indispensable to securing the comprehensive economic transformation that is needed.

The scientific evidence for global warming is unequivocal. According to conservative estimates, an increase in global temperature of more than 1.5°C above pre-industrial levels by the end of the century would cause widespread environmental devastation. Increasingly severe weather conditions would destroy biodiversity and livelihoods, while straining resources. Rising sea levels would cause coastal towns to disappear. All of this would contribute to social instability and large-scale migration.

With the human population expected to reach 8.6bn by 2030 – a billion more than today – the only way to achieve our climate goals is to transform the way the world does business. And here, Europe is well-positioned to take the lead by implementing a Green New Deal.

The idea of a Green New Deal – defined as a “national, industrial, economic-mobilisation plan” that would bring about a rapid transition “away from fossil fuels and toward clean energy” – is not new. Even US President Barack Obama included the concept in his 2008 campaign platform.

Under Obama’s leadership, from 2009 to 2016, the United States led the fight against global warming. At home, this meant promoting clean and renewable energy and introducing incentives to spur carbon-reducing innovations in products and services. Internationally, the Obama administration was integral to concluding the 2015 Paris climate agreement.

But, under Obama’s successor, Donald Trump, the US has gone from climate-action leader to climate-change denier. Now,

Democratic members of the new US Congress – especially freshman Representative Alexandria Ocasio-Cortez – are working to renew the push toward a green economy. Over the next two years, however, Congress will probably be largely preoccupied by a broader battle over the legitimacy of the Trump administration.

This means that Europe now has an ideal opportunity to lead the world's green structural transformation, much as it has led on privacy rules and competition policy over the last two decades. To that end, following the European Parliament elections in May, Europe's liberal and progressive parties and movements should work to implement a Green New Deal.

Success will require, first and foremost, broad public support for a green social contract. But, despite some momentum – for example, the Green Party's recent electoral success in the German states of Bavaria and Hesse – this will not be easy.

As the Yellow Vest protests in France demonstrate, people will not support making the world greener if it makes their daily lives harder. And there is no doubt that the structural transformation required by a Green New Deal for Europe would require vast funding that might otherwise be spent on programmes with more visible or immediate benefits.

Political leaders advocating a Green New Deal for Europe must therefore work hard to protect citizens' interests. As French President Emmanuel Macron put it in an open letter intended to calm the protesters, "Making the ecological transition allows us to reduce spending on fuel, heating, waste management, and transport. But to make this transition a success, we need to invest on a huge scale and support our fellow citizens from the most modest backgrounds."

Beyond practical pledges, political leaders must provide a convincing and even inspiring narrative to spur climate action. Cognitive scientists, such as George Lakoff, have long argued that people are more responsive to political arguments that are framed according to their own values (as opposed to those of the person making the argument). So, if liberal and progressive forces want a majority of the electorate to

support the spending required to mount an effective response to global warming, they need to frame the Green New Deal – not unlike US President Franklin D Roosevelt's original New Deal in the 1930s – in terms of security.

People need to be protected from the instability that increasingly extreme weather will create, and they need support during the transition to greener (higher-quality) employment. Meanwhile, businesses need incentives to pursue the long-term opportunities created by the economic transformation.

This unifying emphasis on long-term societal, personal, and economic security would contrast sharply with prevailing populist narratives, which frame security as an identity issue and thus tend to trigger emotional – and divisive – responses. And there is reason to believe that it could work. One of the key, albeit contested, legacies of Angela Merkel's chancellorship in Germany, for example, is her government's leadership of the *Energiewende*, or energy transformation, which gained traction after the 2011 Fukushima nuclear disaster raised questions about the long-term security of supplies.

Other European countries have also demonstrated leadership on global climate action. The Danish government, for example, recently pledged to phase out the sale of all gasoline- and diesel-powered cars by the year 2030, and a broad political consensus sustains the goal of reaching a carbon neutral society by 2050.

But, to achieve a safer and more prosperous future, all of Europe – and, indeed, the world – needs to pull its weight. A transnational compact uniting Europe's liberal and progressive movements ahead of the European Parliament election can leverage the force produced by cross-partisan consensus and broaden popular support.

Europe desperately needs to take ownership of its future once again. A new vision centred on the Green New Deal can enable it to do just that. – Project Syndicate

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US shale drillers resume rig cuts, shrugging off oil's rebound



Oil explorers cut drilling in US shale fields, shrugging off oil's rebound, as investors urge them to keep spending in check. American drillers idled 15 oil rigs last week, bringing the number of active equipment down to 847, the lowest since May, according to data released on Friday by oilfield-services provider Baker Hughes. Crude futures extended their rally in New York after the report was released, touching a two-month high of \$55.66 a barrel. A rebound in oil prices since Christmas Eve has yet to turn the sentiment of explorers who saw a late 2018 price plunge blow up spending plans and led them to tighten belts across the industry. The biggest rig

cut among major US shale plays came from the Permian Basin of West Texas and New Mexico, where the count dropped by 3 this week, to 481. Helmerich & Payne Inc, the biggest US provider of land rigs, said demand for its most expensive equipment has softened for the start of this year because of uncertainty over oil prices and more prudent spending. "Discussions with several customers regarding capex outlook indicates a mix of increasing, decreasing, and flat spending budgets," chief executive officer John Lindsay told analysts and investors this week on a conference call. "However, the consistent theme is discipline, principally keeping 2019 spending within cash flow." Helmerich joined Halliburton Co and Schlumberger Ltd in slashing spending as their customers are under pressure from shareholders to keep budgets in check. North American explorers are expected to cut their rate of annual spending growth by half to 9%, analysts at Barclays Plc wrote last month in a note to investors. In kind, explorers have cut rig usage all but one week this year.

Exxon, Chevron muscle up in Permian on rig-to-refinery play



Bloomberg/Houston

Exxon Mobil Corp and Chevron Corp bided their time, watching smaller independent drillers make the first moves in shale before placing their bets. Now they're all in.

The two US supermajors are investing heavily in Texas pipelines and processing facilities as they build out their rig-to-refinery approach to the Permian Basin, demonstrating how shale is becoming a core driver of the world's biggest oil companies' future growth.

Both Exxon and Chevron nearly doubled production from the Permian over the last 12 months and expect strong expansion to continue. For Chevron, the region will produce a fifth of all its oil by the mid-2020s. But rapid growth brings transportation and refining challenges. This is where the supermajors think they can steal a march on rivals, who have until now stolen the show in the world's premier shale field.

Exxon will "bring fundamental science and technology, bring large-scale efficient development and bring an integrated well-to-market approach" to the Permian, chief executive officer Darren Woods said during a call with analysts Friday. "We believe our approach will deliver the lowest-cost supply and give us a significant advantage over the rest of the

industry.”

The supermajors only produce about 9% of Permian oil so “have a long way to run,” according to Raoul LeBlanc, a Houston-based analyst at IHS Markit. But they’re coming on fast. At the start of 2017, they spent less than 5% of drilling and well completion capital in the Permian and by the end of 2018 they had jumped to 15%, he said.

While the Gulf Coast refining hub is the natural destination for Permian oil, processing all that crude is not so simple. For years, refiners upgraded facilities to handle heavy, high-sulphur oil from Venezuela, Canada and Mexico as US production waned. But the shale boom brought an abundance of light, low-sulphur crude that isn’t optimal feedstock for heavy refineries.

So more capacity is needed. To handle surging Permian oil flows, Exxon is expanding capacity at its Beaumont refinery in Texas by 65%, a move that will make it North America’s biggest. The cost will be about \$1.1bn, according to analysts at Cowen & Co. Exxon also signed off on a giant crude pipeline, developed with Plains All American Pipeline LP and Lotus Midstream LLC, that will ultimately carry 1mn barrels a day. Keeping pace, Chevron agreed to buy a Houston-area refinery from Brazil’s Petrobras for \$350mn, the company’s first refinery acquisition in decades. The ageing operation that mainly processes the light crude harvested from US shale will boost Chevron’s Gulf Coast refining capacity by almost a third.

“It is in a great location and that allows us to integrate increasing light crude production out of West Texas,” chief executive officer Mike Wirth said on a call with analysts.

For the sceptics, it’s about time. While smaller rivals were experimenting with fracking technology and buying up drilling rights in the now-prolific basin early in the decade, Exxon and Chevron didn’t really get going until years later.

Although Exxon’s inaugural foray into shale happened in 2010 with the \$35bn purchase of XTO Energy Inc, that was a gas deal. The real money was in oil, spurring Exxon to spend a

further \$6.6bn in 2017 to amass Permian drilling rights from the Bass family.

As for Chevron, the California-based driller inherited a commanding 2.2mn acres of drilling rights, the second-largest behind Occidental Petroleum Corp's, from its 2001 takeover of Texaco Inc.

Both companies have gone through steep learning curves, picking up techniques from smaller rivals. Still, there are worries they haven't yet caught up.

"There are concerns that you are perhaps not as leading-edge as we might want you to be in terms of your Permian performance on a returns basis," Paul Sankey, a New York-based analyst at Mizuho Securities USA LLC, said to Chevron's Wirth on the call.

Wirth responded by saying returns are "very, very strong."

The great oil paradox: Too many good crudes, not enough bad ones



The shale boom has created a world awash with crude, putting a lid on prices and markedly reducing U.S. dependence on imported energy. But there's a growing problem: America is producing the wrong kind of oil.

Texas and other shale-rich states are spewing a gusher of high-quality crude – light-sweet in the industry parlance – feeding a growing glut that's bending the global oil industry out of shape.

Refiners who invested billions to turn a profit from processing cheap low-quality crude are paying unheard of premiums to find the heavy-sour grades they need. The mismatch is better news for such OPEC producers as Iraq and Saudi Arabia, who don't produce much light-sweet, but pump plenty of the dirtier stuff.

The crisis in Venezuela, together with OPEC output cuts, will exacerbate the mismatch. The South American producer exports some of the world's heaviest oil and the Trump administration sanctions announced this week will make processing and exporting crude far more difficult. American refiners are

scrambling for alternative supplies at very short notice.

“We still have some holes in our supply plan” over the next 30 days, Gary Simmons, a senior executive at Valero Energy Corp., the largest refiner in the U.S., told investors on Thursday. “We are not taking anything from Venezuela.”

Crude isn’t the same everywhere: the kind pumped from the shale wells of West Texas resembles cooking oil – thin and easy to refine. In Venezuela’s Orinoco region, it looks more like marmalade, thick and hard to process. Density isn’t the only difference – the sulfur content is also important, dividing the market into sweet and sour crude. Heavy crude tends to have more sulfur than light crude.

As Saudi Arabia, Russia and Canada cut production, and American sanctions force Venezuelan and Iranian exports lower, the market for low-quality crude is feeling the impact.

“The strength in the physical crude market continues, led by sour crude shortages,” said Amrita Sen, chief oil analyst at consultant Energy Aspects Ltd. in London, echoing a widely held view within the market.

For consumers and politicians focused on the headline oil price for Brent and West Texas Intermediate, the most popular benchmarks, it may not matter much. Car drivers could even benefit, because too much light-sweet crude often leads to too much gasoline, and lower prices. On the flip side, truckers may find themselves short-charged, as refiners prefer heavy-sour crude to make diesel.

To oil traders in the physical market, it provides opportunities to profit from the changing price spreads between different crude varieties.

Few oil executives see the market changing anytime soon. The supply and demand balance could deteriorate further as OPEC deepens output cuts next month – Saudi Arabia has warned it

will reduce production even further in February. Saudi oil exports into the U.S. last week fell to the second-lowest level in nearly a decade.

“OPEC cuts will sustain the tightness of heavy-sour crude,” Alex Beard, the head of oil at commodities trading giant Glencore Plc.

At the same time, U.S. shale production keeps growing, feeding the glut of light-sweet crude. The proportion of light crude in U.S. total petroleum output has risen to nearly 57 per cent, up from 51 per cent in early 2017, according to Bloomberg calculations based on U.S. Energy Information Administration data.

In the physical market, oil price differentials for some important varieties of heavy-sour crude – including Russia’s main export grade, Urals, and Mars Blend from the U.S. Gulf of Mexico – are at the strongest levels in five years, according to data compiled by Bloomberg.

Mars crude on Tuesday traded at a US\$5.85 premium to U.S. benchmark West Texas Intermediate, compared with a discount of US\$1.60 a barrel a year ago. Earlier this month, Heavy Louisiana Sweet crude traded at a rare premium to its sister variety Light Louisiana Sweet.

“OPEC is having the impact that they wanted in the physical market, which is tightening,” Marco Dunand, chief executive officer of commodities trader Mercuria Energy Group Ltd.

Heavy-sour crude is becoming so expensive – and gasoline refining margins are so low – that some U.S. refiners are running their most sophisticated kit at low rates in an effort to save money. Others are likely to follow.

The cracking margin for heavy-sour crude for the most sophisticated refineries in the Gulf of Mexico has fallen to about US\$2.50 per barrel in recent days, compared with a five-

year average of US\$12 a barrel, according to data from consultant Oil Analytics Ltd.

The global refinery has no option but to adapt almost in real time. Valero is “changing the way it’s sourcing crude on a weekly, daily basis to try to get the best netback we can on the plants,” Joe Gorder, chief executive officer, told investors on Thursday.

IP gas pipeline: Iran invites Pakistan’s legal team



In a new development, Iran has invited Pakistan’s legal team to thrash out if sanctions are effective on gas transactions or not after getting 10-12 legal questions from Islamabad side. Iran is of the opinion that Pakistan needs to get waiver

from US on gas as India and other countries managed. Pakistan and Iran signed GSPA (gas sales purchase agreement) in 2009 under IP gas pipeline project in era of Pakistan Peoples' Party. Since then the project could not get the shape, rather this mega project witnessed many upheavals in the shape of US sanctions first by Obama administration, and under latest scenario more stern curbs by Trump administration. The project was to be implemented under segmented approach meaning by that Iran had to lay down the pipeline on its side and Pakistan had to build the pipeline in its territory. The project was to be completed by December 2014 and come on stream from January 1, 2015. Under the penalty clause it was agreed by both sides that if Pakistan fails to have intake of Iranian gas from January 1, 2015, it will have to pay \$1mn per day as penalty. Pakistan has failed to lay down pipeline of 781km in its territory on account of failure in arranging the funding mainly because of the sanctions imposed on Iran for its nuclear ambitions. But in 2016, the Nawaz government had shelved the project apparently in the wake of pressure of one of the leading UAE countries, but the then Petroleum and Natural Resources Minister Shahid Khaqan Abbasi had confirmed saying: "The government had deferred the project as government wanted the private sector to invest in the LNG terminals and import LNG in the country and to this effect, both new LNG terminals are being erected. "Now under the latest scenario, we have sent to Iranian legal team about 10-12 questions contesting the opinion of Iran on gas sanctions and in return Iranian side has invited Pakistan legal team to hold in-depth talks with its legal wizards over sanctions on gas transaction," a senior official of Petroleum Division said.

However, Minister for Petroleum and Natural Resources, Ghulam Sarwar Khan said, "Yes, both the countries are engaged on this issue, but advancement on IP gas line is conditional with the lifting of the sanctions. However, the decision will be made keeping in view the supreme interests of the country." The law firm of known international law expert of Ahmar Bilal Soofi on

behalf of Pakistan has carved out a questionnaire of 10-12 for legal team in Iran. When contacted Bilal Soofi confirmed saying his firm has sent its response asking for the legal framework under which the sanctions become effective on some commodities not on gas. However, he opted to avoid to response when asked about the details of the questions saying it will not be proper to unravel the details as it is the prerogative of the government of Pakistan. Tehran earlier in November, 2018 asked Islamabad in official engagement held in Islamabad to get the waiver from US sanctions as India has managed, to implement the much delayed Iran-Pakistan (IP) gas line project. Iranian side in November talks had also emphasised arguing that there exists no sanctions particularly on gas transactions, so Pakistan should come forward and start working for IP gas line implementation. The Iranian team had asked authorities to initiate concerted efforts to get waiver from US for implementation of the IP gas line project if Pakistan considers that US sanctions are also active on gas-related transactions. Iranian side in favour of its arguments also said that India has managed the waiver and Pakistan needs to follow the suit. The Trump administration on November 5 imposed a new raft of sanctions on Iran after backtracking from landmark 2015 international agreement on Iran's nuclear programme. However, the US has granted exemptions to eight countries that include China, India, Greece, Italy, Taiwan, Japan and South Africa allowing them to continue buying Iranian oil. Pakistan response said that waiver for eight countries exists for 6 months. And after that they will have to arrange other sources for oil business. However, Petroleum Division had assured Iran that it will consult the law firm which is on the panel of Inter-State Gas System (ISGS) which will be in touch with legal minds of Iran on this particular issue. "There were three kind of sanctions imposed from UN, US and EU on Iran," a senior official said adding that EU sanctions have turned mild, but still there are some selected parameters. However, we need to examine all the sanctions' impact and their nature and will come up with professional

opinion on the issue Iran has raised with Pakistan.” Iran in February, 2018, according to the official, threatened to move arbitration court against Pakistan for unilaterally shelving IP gas line project invoking penalty clause of the Gas Sales Purchase Agreement (GSPA). Tehran had asked for the payment of over \$1.2bn as under the penalty clause from January 1, 2015, as Pakistan is bound to give penalty of \$1mn per day if it fails to have intake of gas from Iran under IP project.

BP ready to expand emissions disclosure on oil investments



Reuters /Paris

BP has agreed to broaden its disclosure on greenhouse gas emissions to show how it thinks future investments in oil and gas align with UN-backed climate goals, it said yesterday. Following talks with a large group of investors, BP also agreed to back a shareholder resolution on the measures at its

annual general meeting (AGM), further evidence of the way the energy industry and investors are engaging on climate issues. The agreement with a group of investors with \$32tn under management, known as Climate Action 100+, comes weeks after rival Royal Dutch Shell agreed to introduce broad carbon emissions targets linked to executive pay.

Unlike other companies, BP has agreed to detail how major future investments in fossil fuels will be consistent with the 2015 Paris agreement to reduce carbon emissions to net zero by the end of the century by phasing out fossil fuels.

It will set out new metrics to measure greenhouse gas emissions from its operations.

BP said in a statement it would link carbon targets to the remuneration of 36,000 of its employees, including executive directors.

If the resolution is approved at the AGM, BP will introduce these changes into its reporting for 2019 onwards.

But the joint agreement revealed a fundamental rift with investors over BP's statement that its strategy today was in line with the Paris agreement.

"Investors remain concerned that the company has not yet demonstrated that its strategy, which includes growth in oil and gas as well as pursuing low carbon businesses, is consistent with the Paris goals," Climate Action 100+ said in statement.

BP plans to rapidly grow oil and gas production over the next five years thanks to more than a dozen new projects launched in recent years, as well as the \$10.5bn acquisition of BHP's US shale portfolio last year.

"We will be open and transparent about our ambitions and targets as well as our progress against them," BP chairman Helge Lund said in a statement.

BP chief executive officer Bob Dudley has repeatedly said that while the oil and gas sector needs to play a role in the transition to low carbon energy, it still needs to meet growing demand for fossil fuels, particularly in emerging economies.

“BP is committed to helping solve the dual challenge of providing more energy with fewer emissions. We are determined to advance the energy transition while also growing shareholder value,” Lund said.

Investors and analysts have said many oil and gas projects, such as complex and expensive investments in Canada or some deepwater basins, will not be needed in the transition to a low carbon energy.

While BP agreed to increase its disclosure around climate, it also rejected another resolution tabled by climate activist group Follow This calling for emission reduction targets for all its operations, including emissions from products it sells to customers, known as Scope 3.

BP announced in April plans to keep carbon emissions flat over the decade to 2025 even as its oil and gas output was set to grow.

It also plans to invest up to \$500mn per year on renewable energies such as solar, wind and power storage.