Shell plans to slash $9bn from spending in wake of coronavirus

**Anglo-Dutch oil giant to cut operating costs by $4bn and capital spend by up to $20bn**

<https://www.theguardian.com/business/2020/mar/23/shell-plans-to-slash-9bn-from-spending-in-wake-of-coronavirus>

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[**Jillian Ambrose**](https://www.theguardian.com/profile/jillian-ambrose)

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[[](https://www.theguardian.com/business/2020/mar/23/shell-plans-to-slash-9bn-from-spending-in-wake-of-coronavirus#img-1)](https://www.theguardian.com/business/2020/mar/23/shell-plans-to-slash-9bn-from-spending-in-wake-of-coronavirus" \l "img-1)

 Ben van Beurden, chief executive of Royal Dutch Shell, says measures will ‘ensure financial strength and resilience’. Photograph: Sergio Moraes/Reuters

Royal Dutch Shell plans to slash $9bn (£7.2bn) from its spending plans to weather the collapse in oil market prices in the wake of the [coronavirus outbreak](https://www.theguardian.com/business/live/2020/mar/23/markets-slump-us-senate-covid-19-ftse-dax-shares-recession-stimulus-business-live).

The oil giant set out plans to reduce its operating costs by between $3bn and $4bn this year while cutting its planned capital expenditure by $5bn to $20bn for the year.

The Anglo-Dutch company will also suspend plans to buy back the shares [which were paid in lieu of a dividend](https://www.theguardian.com/business/2014/jul/31/shell-30bn-share-buyback-profits-double) during the last oil market downturn in 2016.

Shell hopes that “decisive action” could help protect the cash flows vital to maintaining one of the biggest annual shareholder payouts of any company. It pays out $16bn in dividends every year, but analysts fear the policy may be under threat from the market downturn.

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Oil prices have collapsed at their fastest rate in a generation following a double blow dealt by the outbreak of the Covid-19 virus, which has cut demand for energy, and [Saudi Arabia’s oil price war](https://www.theguardian.com/world/2020/mar/11/saudi-arabia-oil-price-war-production-increase-aramco) which will dramatically increase the market’s oil supply.

Shell boss Ben van Beurden said the new measures would “ensure the financial strength and resilience of our business” during the “tough conditions” facing major oil companies.

“The combination of steeply falling oil demand and rapidly increasing supply may be unique, but Shell has weathered market volatility many times in the past,” he said.

Shell would continue to progress its **pipeline of projects** to help shift its portfolio to **cleaner** **energy** sources, a spokeswoman said, but keep in mind the macroeconomic outcome and any impact on its supply chains.

Shell had planned to spend [**up to $2bn a year on “new energies” in 2020**](https://www.theguardian.com/business/2020/jan/03/royal-dutch-shell-may-fail-to-reach-green-energy-targets) before ramping up its green commitments to a maximum of $3bn a year between 2021 and 2025.

Oil company green investments, although a fraction of its overall spending, could become [more difficult during the pandemic](https://www.theguardian.com/environment/2020/mar/12/coronovirus-poses-threat-to-climate-action-says-watchdog) as companies come under increasing financial pressure.

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The market value of Shell has already fallen by more than half since January when the outbreak of the pandemic caused a steep drop in demand from the world’s biggest energy importer. Shares in the FTSE 100 company traded at lows of £10.36 on Monday morning, from £23 a share in the first week of the year.

Nicholas Hyett, an equity analyst at Hargreaves Lansdown, said if oil prices remained below $40 a barrel Shell’s dividend “could yet become a burden that’s too much to bear”.

“That’s the rub for Shell investors,” he said. “The group’s taking emergency action to protect cash flow in the short term, but the influence of the oil price means its future is largely out of its hands. There’s no knowing exactly how long the toxic combination of increased global supply and falling demand will last.”

**We've got an announcement…**

… on our progress as an organisation. In service of the escalating climate emergency, we have made an important decision – [to renounce fossil fuel advertising](https://www.theguardian.com/media/2020/jan/29/guardian-to-ban-advertising-from-fossil-fuel-firms-climate-crisis), becoming the first major global news organisation to institute an outright ban on taking money from companies that extract fossil fuels.

In October we outlined our pledge: that the Guardian will give global heating, wildlife extinction and pollution the urgent attention and prominence they demand. This resonated with so many readers around the world. We promise to update you on the steps we take to hold ourselves accountable at this defining point in our lifetimes. With climate misinformation rife, and never more dangerous than now, the Guardian's accurate, authoritative reporting is vital – and we will not stay quiet.

You've read 13 articles in the last four months. We chose a different approach: to keep Guardian journalism open for all. We don't have a paywall because we believe everyone deserves access to factual information, regardless of where they live or what they can afford to pay.

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The Guardian believes that the problems we face on the climate crisis are systemic and that fundamental societal change is needed. We will keep reporting on the efforts of individuals and communities around the world who are fearlessly taking a stand for future generations and the preservation of human life on earth. We want their stories to inspire hope.

We hope you will consider supporting us today. We need your support to keep delivering quality journalism that’s open and independent. Every reader contribution, however big or small, is so valuable. **Support the Guardian from as little as £1 – and it only takes a minute. Thank you.**

**Shell says first-quarter impact of coronavirus and oil price war mostly reflected in March**

<https://www.marketwatch.com/story/shell-says-first-quarter-impact-of-coronavirus-and-oil-price-war-mostly-reflected-in-march-2020-03-31>

[3](javascript:void(0))

Published: March 31, 2020 at 2:20 a.m. ET

By

[Steve Goldstein](https://www.marketwatch.com/topics/journalists/steve-goldstein?mod=MW_author_byline)

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Royal Dutch Shell [**RDS.A, +1.20%**](https://www.marketwatch.com/investing/stock/RDS.A?mod=MW_story_quote) [**RDSA, 8.120%**](https://www.marketwatch.com/investing/stock/RDSA?countryCode=UK&mod=MW_story_quote) said the impact of COVID-19 and the OPEC price war was "primarily reflected in March with a relatively minor impact in the first two months." Upstream production is expected to be between 2,650 and 2,720 thousand barrels of oil equivalent per day in the first quarter. Ahead of its first-quarter results, Shell said it still estimates that every $10 per barrel change in the price of Brent crude oil has a $6 billion per annum impact on cash flow from operations, but that "this price sensitivity is indicative and is most applicable to smaller price changes than we currently witness as well as in relation to the full-year results." Shell said it signed a new $12 billion credit facility on top of its existing $10 billion facility, and it has another $20 billion in cash or cash equivalents.

[](https://www.marketwatch.com/story/ellis-marsalis-new-orleans-jazz-patriarch-dies-at-85-2020-04-01?mod=nextup_bomw)

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[**Ellis Marsalis, New Orleans jazz patriarch, dies at 85 from coronavirus-related pneumonia**](https://www.marketwatch.com/story/ellis-marsalis-new-orleans-jazz-patriarch-dies-at-85-2020-04-01?mod=nextup_bomw)

Ellis Marsalis, jazz pianist, teacher and patriarch of a New Orleans musical family that includes famed musician sons Wynton and Branford, has died. He was 85.

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* **A D**Leader

1d

The behavior of Shell stock is bizarre to say the least. Up ~50% since it hit its low on March 19. Painful and baffling. With hindsight its all logical to many geniuses I am certain.

Reply

* **Bruno Bear**Influencer

2d

The difficulty I see for Shell is that the profits from its down stream operations would normally cushion the effects of a drop in the oil price which directly affects its upstream profits. Not so much this time. Margins on sales of refined products will have improved, but sales of those refined products will have fallen a lot. No aviation/jet fuel being sold. Reduced petrol/diesel usage. And there is no certainty as to when the lockdown will end. Very hard to see the dividend surviving at the present level. They will have to preserve cash. The dividend was already stretched at $60 per barrel. Double whammy of reduced oil price and massively reduced sales. Its sales of natural gas LNG will help, but those contracts may be linked to the oil price as well, and we are headed into summer where there will be less consumption. Basically not good at all. Hence the need for more borrowing.

Reply

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* **Sal Gentile**Leader

2d

Shell's statement clearly demonstrates that regardless of what they said about quarterly profits they believe they will be facing rough times ahead and want to lock in more loan guarantees now. *Shell said it* ***signed a new $12 billion credit facility on top of its existing $10 billion facility,*** *and it has another $20 billion in cash or cash equivalents.*

Reply

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# [Coronavirus-earnings season: What to expect as companies begin to report Tuesday](https://www.oilandgas360.com/coronavirus-earnings-season-what-to-expect-as-companies-begin-to-report-tuesday/)

in [Capital Markets](https://www.oilandgas360.com/capital-markets/) / [Closing Bell Story‎](https://www.oilandgas360.com/closing-bel%e2%80%8al-story%e2%80%8e/) / [Earnings](https://www.oilandgas360.com/earnings/) / [Economy](https://www.oilandgas360.com/economy/) / [Finance](https://www.oilandgas360.com/finance/)   by— [Oil & Gas 360](https://www.oilandgas360.com/author/enercom/)

[**CNBC**](https://www.cnbc.com/2020/04/13/heres-what-we-can-expect-from-earnings-season-as-companies-ride-out-the-coronavirus-pandemic.html)

[**JPMorgan Chase**](https://www.cnbc.com/quotes/?symbol=JPM)kicks off earnings season on Tuesday. The bad news: Short-term guidance will be very ugly.



Source: CNBC

 But there’s some good news:

 1) The Securities and Exchange Commission has told corporations that this earnings season is not routine and has encouraged companies to provide forward-looking guidance, and not be concerned that the information may change rapidly. This will make executives far more comfortable to comment freely on what is happening without fear the SEC will come down on them if they change their forecast a few weeks later. Expect a lot more detailed commentary.

2)  Markets are stabilizing as top-down, and macro strategists are beginning to feel more confident even though 2020 estimates will be down 20% to 30% from 2019. While this is a shocking decline, these top-down strategists were clueless even a few weeks ago. That their long-run estimates (guesses, really) are coalescing around a common range is a good sign Wall Street is starting to get its head around the magnitude of the decline, the first step in figuring out rational pricing.

Here’s what we might expect to hear from corporations when they begin reporting. I’ve broken it down into sectors to make it easier to digest. While I have spoken to many traders over the past several days, the observations are my own.

## **Regional banks**

Lower rates and a flatter yield curve will be a major problem.

Federal Reserve loan programs may help a bit, but regular loan demand from corporations certainly will be lower. Consumers may use draw-downs on home equity loans.

There will be higher provisions for credit losses. Regional banks have particularly large exposure to restaurants, energy and other small businesses.

Asset management also will be hit as lower demand for financial services and lower markets mean lower fees.

## **Energy**

This sector is likely to see the largest year-over-year declines in earnings, more than 50%.

Output cuts by Saudi Arabia and Russia will not enough to offset a near-complete collapse in global demand for oil.

Lower prices will be of no benefit to refiners because no one is driving.

A massive pullback in capital spending is expected.

Many companies will reduce or eliminate dividends.

Among U.S. shale producers, a wave of smaller-company bankruptcies expected.

## **Industrials**

This sector was weak before coronavirus due to the effect of tariffs and Boeing woes, then came the global supply-chain disruption that began in China in January.

Aerospace and defense were especially hit hard.

## **Materials**

Pricing is weak.

There is much lower global demand for chemicals, metals and mining.

The Russia-Saudi Arabia oil war also impacts chemicals with lower prices.

## **Technology**

Consumer demand is lower.

Smartphone, computer sales are likely to decline, but gaming sales remain strong.

Semiconductor sales are likely to decline again in 2020.

Cloud investment is likely to remain strong.

Software-as-a-service and other platforms that have migrated to the cloud may hold up better.

## **Real Estate Investment Trusts**

Health care: Primarily senior housing, it faces a significant risk from the coronavirus.

Apartments: Rental income will be disrupted, but expanded unemployment and small business loans will help.

Retail: Those with exposure to grocery stores will do better, but for others the choice of taking no rent or forcing evictions may be the final straw.

## **Communication Services**

Entertainment:  Workforce reductions will not overcome closing of theme parks, movie theaters, sports events.

Media companies: There’s more viewing, but advertising is challenged, and many are still facing continuing loss of subscribers (but broadband still growing).

Competition is still driving costs higher.

For some ([**Disney**](https://www.cnbc.com/quotes/?symbol=DIS)), digital subscriptions are an offsetting plus.

## **Consumer Discretionary**

Autos: A huge drop in sales in all major markets (China, Europe, U.S.), is offset by higher demand for auto parts and record-high vehicle age.

Homebuilders: Weak consumer confidence will delay first-time and move-up buyers, permits and new orders declining rapidly. Shutdowns of construction. Prolonged shutdown could interrupt building material supplies. Expect drastic cutback in land inventories (2008 playbook).

Travel and leisure: Mass cancellations for hotels, airlines, cruise ships resulting in enormous revenue losses combined with still-high fixed costs, even with layoffs.

## **Consumer Staples**

Supermarkets, food retailers, packaged foods: All are benefiting from the work-at-home trend; commodity inflation (packaging costs) is much lower.

Household products: Enormous demand for cleaning products, toilet paper, paper towels.

Personal products: Some demand but duty-free sales evaporated and department stores were closed.

Food distribution: Hurt due to restaurant, hotel, school closures.

# [SilverBow Resources announces actions taken in response to current market conditions](https://www.oilandgas360.com/silverbow-resources-announces-actions-taken-in-response-to-current-market-conditions-2/)

in [Closing Bell Story‎](https://www.oilandgas360.com/closing-bel%e2%80%8al-story%e2%80%8e/) / [Corporate Governance](https://www.oilandgas360.com/governance/)   by— [Oil & Gas 360](https://www.oilandgas360.com/author/enercom/)

[**Oil and Gas 360**](https://www.oilandgas360.com/silverbow-resources-announces-actions-taken-in-response-to-current-market-conditions/)

HOUSTON–(BUSINESS WIRE)–SilverBow Resources, Inc. (NYSE: SBOW) (“SilverBow” or “the Company”) today provided an update on actions taken in response to the unprecedented global health and safety events impacting the oil and gas market.



Sean Woolverton, SilverBow’s Chief Executive Officer, commented, “The safety of our employees, contractors, and partners in the communities in which we operate remains our top priority. We have and will continue to take all necessary actions to ensure the well-being of our stakeholders.”

Mr. Woolverton continued, “In light of this unforeseeable abrupt decline in commodity prices, as well as the heightened uncertainty with respect to the duration of depressed prices, we are taking prudent steps to protect our balance sheet while also adjusting capital spend to ensure return thresholds continue to be met. We continue to preserve optionality in order to respond efficiently once market conditions show signs of recovery. SilverBow’s long-term strategy of building a diversified commodity portfolio in a single basin with a peer-leading cost structure provides us with many opportunities to quickly adapt to market conditions. Furthermore, our proactive risk management strategy to hedge commodity prices in advance of development programs has positioned us to persevere through a protracted period of low prices.”

Mr. Woolverton concluded, “I want to acknowledge and express how proud I am of our employees’ dedication and continued optimism during the challenging time that we find ourselves in.”

The actions announced include:

***CAPITAL INVESTMENT***

* SilverBow suspended drilling and completions activity until commodity prices warrant further investment. As such the Company is now guiding to a 2020 capital program of $80-$95 million, a 55% reduction at the midpoint from the previous guidance.
* The Company deferred completing and bringing online eight oil wells until at least the second half of 2020.
* SilverBow is contemplating a pivot to gas development late in 2020 if prices support return thresholds.

***PRODUCTION MANAGEMENT***

* SilverBow expects first quarter total net production to average approximately 230 MMcfe/d, with a commodity mix of 79% natural gas, 12% oil, and 9% natural gas liquids.
* During the second half of March, the Company elected to curtail approximately 35 MMcf/d of net gas production. In April, SilverBow has elected to curtail a total of 50 MMcf/d of net gas production and approximately 2,000 Bbls/d of net oil production.
* In light of extremely low commodity prices, SilverBow is currently assessing the economic merits of curtailing additional production.

***RISK MANAGEMENT***

* With the decrease in capital investment, SilverBow elected to tactically unwind a series of oil derivative contracts in 2020 and 2021 above its expected production, resulting in approximately $38 million of cash inflow in the month of March.
* For the balance of 2020, from April through December, the Company’s hedge position covers 100% of its existing 2020 oil volumes at an average price of $53.27 per barrel and 61% of its existing 2020 gas volumes at an average price of $2.63 per MMBtu.
* The Company recently added derivative positions, for the period of January 2021 through March 2021, of 45 MMcf/d at an average price of $2.68 per MMBtu.
* As of April 9, 2020 and pro forma for the recent hedge activity, SilverBow’s mark-to-market value of its hedge position was approximately $41 million.

***ACQUISITION & DIVESTITURE UDPATE***

* SilverBow recently acquired a private entity with Eagle Ford assets and entered into a definitive agreement to divest certain assets located in the Powder River Basin.
* The strategic acquisition adds 10 MMcf/d of net natural gas production directly offsetting the Company’s existing assets, bringing SilverBow’s combined acreage to more than 200,000 net acres in the western portion of the Eagle Ford. The Company has the opportunity to recognize synergistic upside if natural gas prices improve in the future.
* The divesture includes an overriding royalty interest in 188 net acres across Campbell, Converse and Niobrara Counties, Wyoming. The transaction is expected to close during the second quarter.

***FINANCIAL UDPATE***

* As of March 31, 2020, SilverBow’s liquidity was $145.6 million, consisting of $35.6 million of cash and $110.0 million of availability under the Company’s revolving credit facility.
* SilverBow’s net debt was $454.4 million, calculated as total long-term debt of $490.0 million less $35.6 million of cash, a 5% decrease from December 31, 2019.
* The Company expects to generate free cash flow at current strip pricing for the balance of 2020.

Given the prudent measures currently undertaken and under consideration to protect SilverBow’s balance sheet and maximize free cash flow, the Company’s previously issued 2020 guidance should no longer be relied upon. SilverBow continues to assess a wide range of further measures to maximize value in the prevailing commodity price environment, including further curtailments of certain oil and gas production until prices improve to required return thresholds. The Company expects to update its detailed financial and operational guidance in conjunction with its first quarter earnings release next month.

***ABOUT SILVERBOW RESOURCES, INC.***

SilverBow Resources, Inc. (NYSE: SBOW) is a Houston-based energy company actively engaged in the exploration, development, and production of oil and gas in the Eagle Ford Shale in South Texas. With over 30 years of history operating in South Texas, the Company possesses a significant understanding of regional reservoirs which it leverages to assemble high quality drilling inventory while continuously enhancing its operations to maximize returns on capital invested. For more information, please visit www.sbow.com.

# [Oil rises after OPEC and allies agree to historic production cut](https://www.oilandgas360.com/oil-rises-after-opec-and-allies-agree-to-historic-production-cut/)

in [Closing Bell Story‎](https://www.oilandgas360.com/closing-bel%e2%80%8al-story%e2%80%8e/) / [Commodity Pricing](https://www.oilandgas360.com/commodity/) / [Crude Oil News](https://www.oilandgas360.com/crude-oil-news/) / [Economy](https://www.oilandgas360.com/economy/) / [Energy News](https://www.oilandgas360.com/energy_feed/) / [OPEC](https://www.oilandgas360.com/opec/)   by— [Oil & Gas 360](https://www.oilandgas360.com/author/enercom/)

[**CNBC**](https://www.cnbc.com/2020/04/12/oil-prices-flat-after-opec-and-allies-agree-to-historic-production-cut.html)

Oil prices moved higher on Monday after OPEC and its allies agreed to cut production by 9.7 million barrels per day. The deal, which was finalized on Sunday after marathon discussions that spanned four days, is the single largest output cut in history.



Source: CNBC

[**U.S. West Texas Intermediate crude**](https://www.cnbc.com/quotes/?symbol=@CL.1) rose 1.9% to trade at $23.18 per barrel, while international benchmark [**Brent crude**](https://www.cnbc.com/quotes/?symbol=@LCO.1) traded 70 cents higher at $32.18. Earlier in the session WTI rose as much as 8%, while also trading in negative territory at one point during a volatile session.

The group, known as OPEC+, initially proposed cutting production by 10 million bpd — amounting to some 10% of global oil supply — on Thursday, but Mexico opposed the amount it was being asked to cut, holding up the final deal. Under the new agreement, Mexico will cut 100,000 bpd, instead of its initial allocation of 400,000 bpd.

The 9.7 million barrels per day cut will begin on May 1, and will extend through the end of June. The cuts will then taper to 7.7 million bpd from July through the end of 2020, and 5.8 million bpd from Jan. 2021 through April 2022. The 23-nation group will meet again on June 10 to determine if further action is needed.

“Unprecedented measures for unprecedented times,” Ed Morse, Citi’s global head of commodities, wrote in a note to clients on Sunday. Morse said the cut will have a significant impact in the second half of the year and help lift prices to the mid-$40s by year-end, but that there will be short-term pain while the market rebalances.

“It’s simply too late to prevent a super-large inventory build of over one billion barrels between mid-March and late May and to stop spot prices from falling into single digits,” he said.

On Thursday WTI crude dropped more than 9% as traders feared the cut wouldn’t be big enough to combat the fall off in demand caused by the coronavirus pandemic. For the year WTI is down 62%, while Brent has shed 52%. The market was closed on Friday.

“This is at least a temporary relief for the energy industry and for the global economy,” Rystad Energy’s head of analysis Per Magnus Nysveen told CNBC in an email. “Even though the production cuts are smaller than what the market needed and only postpone the stock building constraints problem, the worst is for now avoided.”

President Donald Trump, who was heavily involved in brokering a deal between Saudi Arabia and Russia after a price war broke out between the two countries, cheered the agreement saying in a tweet that it’s a “great deal for all.” “This will save hundreds of thousands of energy jobs in the United States,” he added. In a tweet Monday he said the energy industry “will be strong again.”

“The output cut may help somewhat, but the market situation remains stacked against the producers, especially in the short-term,” added Again Capital’s John Kilduff. “Prices will likely grind lower, as the global backlog of crude oil grows. A retest of the $20.00 level is likely over the next few weeks.”

OPEC+ is hoping that nations outside of the group, including the U.S., Canada and Norway, will also cut back on production in an effort to shore up prices. Trump has said that market forces will naturally curb output.

U.S. Energy Secretary Dan Brouillette reiterated this point on Friday, saying that about two million barrels per day of U.S. production would have been taken offline by the end of the year, with the number potentially as high as three million.

“Today’s crisis transcends the interests of any one nation and requires a swift and decisive response from us all. Failure to act has far reaching consequences to each of our economies,” he said Friday in prepared remarks at the G20 meeting. “This is a time for all nations to seriously examine what each can do to correct the supply/demand imbalance,” he added.

# The Fossil Fuel/Renewable Energy Inflection Point: 3 Perspectives

**[](https://future-trends.cleantechnica.com/subscribe/)**

April 13th, 2020 by [**Steve Hanley**](https://cleantechnica.com/author/stephenhanley/)

The world is struggling with the coronavirus pandemic right now, but even the darkest of clouds can have a silver lining. For many, it is [**seeing the world around them with fresh eyes**](https://cleantechnica.com/2020/04/05/covid-19-lockdown-illustrates-connection-between-people-the-earth-pollution/). People are driving less and industry is producing less, so there is less pollution in the air. That means we can see things like buildings and  mountains that have been obscured for years, if not decades. Those clearer skies are convincing many people the time is ripe to move away from fossil fuels and toward renewable energy. Here are three perspectives on how that transition could unfold.

### The Los Angeles Times

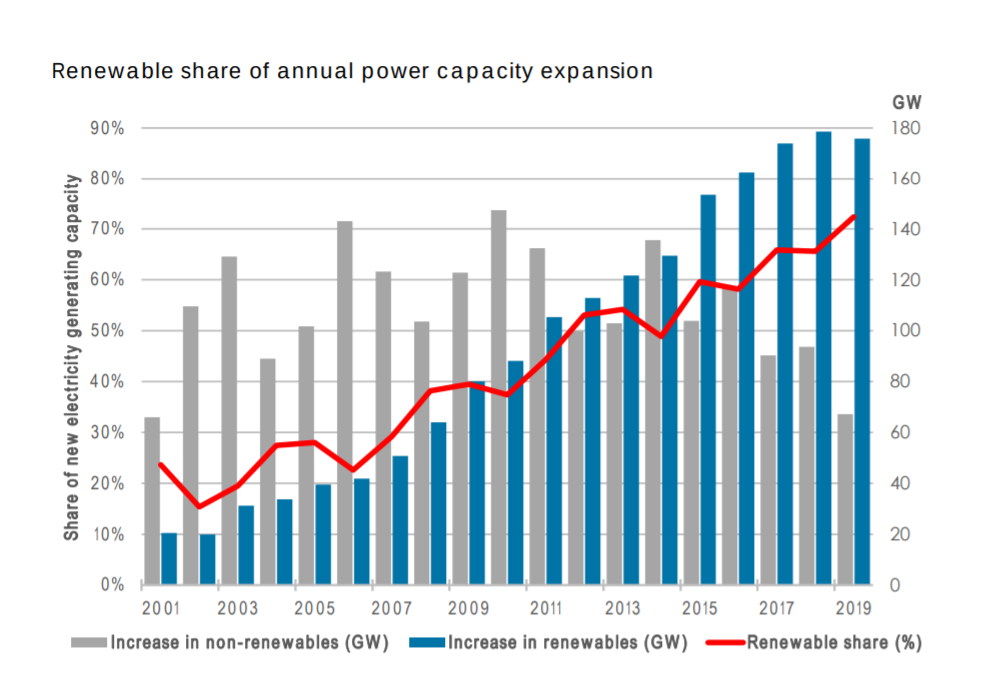
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The headline of an editorial in [***The Los Angeles Times***](https://www.latimes.com/opinion/story/2020-04-07/renewable-energy-future-global-warming-coronavirus-economy) on April 7 puts things succinctly. “Renewable energy must be the future, if we are to have one at all.” Author Scott Martelle leads off with the recent good news from the [**International Renewable Energy Agency**](https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2020/Mar/IRENA_RE_Capacity_Highlights_2020.pdf?la=en&hash=B6BDF8C3306D271327729B9F9C9AF5F1274FE30B) that renewables were responsible for 72% of all new electrical generation in 2019. He adds,

The current coronavirus pandemic has, at least temporarily, made a significant impact on greenhouse gas emissions. But that reflects a stalled economy rather than smart energy consumption choices. The pandemic is a naturally occurring threat to humans, as were SARS and MERS before it. Global warming, by contrast, is being driven by human behavior; it is a self-inflicted crisis.

We can best address the climate crisis by changing practices, by converting our global economy from fossil fuels to renewable sources, by using the force of our collective will to change our collective behavior and reduce the damage our actions inflict on the environment, which we rely on for our very survival.

The stats that show we are moving in the right direction, albeit it too slowly, are a positive sign during these trying days. But they are also a further spur to action. We can see where decisions, policies and actions lead to positive effects, but also where continued self-destructive actions — beginning with burning coal — imperil us all.

### Reuters

In an article for [***Reuters***](https://www.reuters.com/article/us-column-russell-health-coronavirus-cli/renewable-energy-wins-over-oil-and-gas-in-post-coronavirus-world-russell-idUSKBN21P0L5), author Clyde Russel writes, “Renewable energy wins over oil and gas in post-coronavirus world.”  He writes, “The coronavirus is also likely to change the market dynamics of the various types of energy, and mostly in favor of renewables such as wind, solar and hydropower.

The virus will unlock billions of stimulus dollars, he adds. And while oil and gas prices will recover from recent price shocks, it will take years for the market to readjust to the new realities. “Previous experience of price collapses shows it takes several years for a full recovery to eventuate, mainly as demand has to recover, or supply has to adjust lower in order to achieve a balanced market. For crude and LNG what this means is that much of the investment that had been planned before the coronavirus struck will be delayed or even scrapped. (emphasis added)”

He points out that up to $210 billion of planned oil and gas investments are now at risk from the coronavirus, according to a research note prepared by Wood Mackenzie dated April 2. “$110 billion of investment will almost certainly be deferred, with another $100 billion at risk,” said Rob Morris of  Wood Mackenzie’s upstream research team. “New committed investment could be as low as $22 billion if only the most advantaged projects progress.”

This massive pullback in oil and gas spending will ultimately help drive a recovery in crude and LNG prices as supply tightens over the longer term, Russell says, but it also opens up a rare opportunity for renewables to grab more market share. “The biggest costs for utility scale wind, solar and battery storage projects are the upfront capital, given that once these projects are operating costs tend to be minimal.”

Russell also says the oil and gas industries have lost the public relations battle in developed countries where many have come to see them as part of the carbon emissions problem and to see renewables as the solution. “In developing nations such as India, Vietnam and others in Asia and Africa, renewables will likely be significantly cheaper and faster to build and connect to electricity grids than conventional fossil fuel power plants.”

“There is a counter-argument that cheap LNG will propel demand for new gas-fired power generation,” he says,” but this will only be the case if the project developers and financiers believe that the current low LNG price will prevail for the 40 years life of a typical power plant. (emphasis added).” It is extremely unlikely that any will be so foolish, which is good news for renewable energy.

### The New York Times

Writer Ivan Penn of [***The New York Times***](https://www.nytimes.com/2020/04/07/business/energy-environment/coronavirus-oil-wind-solar-energy.html) also thinks renewables will get a boost from the current pandemic. He cites analysts from Raymond James who say as demand for electricity shrinks during pandemic induced lockdowns, utilities will try to offset income losses by relying on solar and wind, which produce electricity at very low prices once the facilities are built and placed in service.

“Renewables are on a growth trajectory today that I think isn’t going to be set back long term,” sys Dan Reicher, director of the Steyer-Taylor Center for Energy Policy and Finance at Stanford University and an assistant energy secretary in the Clinton administration. “This [the coronavirus] will be a bump in the road.”

It’s true that renewable energy companies are suffering the same layoffs as other companies, but many think the long term trend for renewables is still strong. “We blew through all of the projections,” Caton Fenz, chief executive of ConnectGen, a wind, solar and electricity-storage developer based in Houston, tells The Times. “We’re surfing a long-term wave. We just can’t get specific things done because of the pandemic, but I don’t think that affects the broader trajectory.”

Gabriel Alonso, head of 547 Energy, says renewables have a big advantage over thermal and nuclear generators because they can be built fairly quickly, which means their revenue stream can begin sooner.

There will be enough financial pain to go around before the grip the pandemic has on the economy begins to ease. But Abigail Hopper, president of the Solar Energy Industries Association, is convinced the long term prospects for renewables are still bright. “We believe, over the long run, we are well positioned to outcompete incumbent generators,”she says.

### The Takeaway

Years from now, when historians look back and try to pinpoint exactly when renewables surged and fossil fuels contracted, the coronavirus pandemic of 2020 may be the time they focus on. As Scott Martelle of the LA Times says, it’s now or never, people. We all have to put our shoulder to the wheel and do everything we can to move the renewable energy revolution forward. The Earth may not get another chance to avoid overheating to the point where most living things will be threatened with extinction. An opportunity for renewables may be knocking, but someone has to open the damn door. 

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Renewable energy wins over oil and gas in post-coronavirus world: Russell

Clyde Russell

5 MIN READ

LAUNCESTON, Australia (Reuters) - Imagine waking up one morning with a deadly tiger snake in your bed. To make matters worse out of the window you notice an approaching bushfire.

Both are a threat to your life, but you are going to deal with the imminent danger of the snake first, and then tackle the more distant but still serious fire. It’s the same with the new coronavirus and climate change.

Since the rapid spread of the coronavirus beyond its origin in China and the social and economic havoc it’s wreaking across the globe, it may seem that climate change has dropped off the radar screen.

Certainly, commentators on the right of the political spectrum and those who are climate change deniers have sometimes resorted to something akin to glee in pointing out how the coronavirus has shifted climate change to the back burner of current concerns.

But this ignores the fact that at some point the world will contain the pandemic, and climate change will once again become a driving influence in the debate on the future of energy.

The coronavirus is also likely to change the market dynamics of the various types of energy, and mostly in favour of renewables such as wind, solar and hydropower.

The outbreak had already wrought radical change in two different ways. The first is that the oil and gas industry has been shaken to its core, while the second is that the cost of capital is at record lows, and there will be billions of dollars of stimulus spending looking for a home.

Take the oil and gas industry. While the media and analysts tend to focus on the immediate issue of massive oversupply amid a demand shock from much of the world’s economy going into some form of hibernation, the longer-term picture has also shifted.

The oil and gas industry has been crippled by the 53% slump in Brent crude futures since the high in January to around $34 a barrel on Tuesday, and the 66% plunge in the spot price of liquefied natural gas (LNG) in Asia from its pre-winter peak in October last year to last week’s record-low $2.80 per million British thermal units (mmBtu).

While it’s likely that both crude and LNG prices will recover in the coming months and years as demand growth resumes, it’s also likely that the trajectory will be lower.

Previous experience of price collapses shows it takes several years for a full recovery to eventuate, mainly as demand has to recover, or supply has to adjust lower in order to achieve a balanced market.

For crude and LNG what this means is that much of the investment that had been planned before the coronavirus struck will be delayed or even scrapped.

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#### About the Author

# 7 Things To Know About Decarbonization In The American Energy Innovation Act

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March 7th, 2020 by [**Guest Contributor**](https://cleantechnica.com/author/guestwriter/)

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by [**Greg Carlock**](https://www.wri.org/profile/greg-carlock)

A new legislative package on energy is working its way through the U.S. Senate. The [**American Energy Innovation Act**](https://www.energy.senate.gov/public/index.cfm/american-energy-innovation-act-aeia) (AEIA) is a compilation of dozens of energy bills that have passed the Senate Committee on Energy and Natural Resources, most with bipartisan support.

The sponsors do not cast this as a comprehensive climate change or clean energy bill. The AEIA is not the sole solution to decarbonizing the U.S. economy, but it would be the first major energy bill in over a decade and could provide incremental building blocks toward progress on an issue where bipartisan support has been evasive. It doesn’t replace the need for additional emissions reduction mandates, infrastructure spending, tax incentives and a carbon price to ensure the United States decarbonizes at a pace consistent with the findings from the Intergovernmental Panel on Climate Change and goals of the Paris Agreement.

Acknowledging that not all building blocks are equal, and more are needed, here are five bright spots within the AEIA for rapid decarbonization of the U.S. economy, and two areas of concern:

### Bright Spots for Decarbonizing the U.S. Economy

#### 1. Novel Clean Energy Research and Development

Wind and solar power are mature clean energy technologies that get a lion’s share of attention. They currently contribute 10% of total electricity generation, and [**could provide up to 30% by 2050**](https://www.eia.gov/outlooks/aeo/section_issue_renewables.php) according to the U.S. Energy Information Administration. [**Other analysts**](https://www.bbhub.io/dotorg/sites/28/2019/12/Accelerating-Americas-Pledge.pdf) think this contribution will be much larger. Meanwhile, electricity from other renewable sources has remained niche. Geothermal power is currently less than half a percent of annual generation, and marine and hydrokinetic power (MHK) — energy from tides, waves and river currents — barely registers.

In an “all of the above” technology strategy, the AEIA makes a down payment on these two sources of renewable energy. It requires the Department of the Interior to update its [**2008 assessment**](https://pubs.usgs.gov/fs/2008/3082/pdf/fs2008-3082.pdf) of geothermal potential in the United States, which found over 500 GW of potential capacity from traditional and enhanced geothermal technologies. This is significant considering the [**current U.S. installed capacity**](https://www.eia.gov/outlooks/aeo/data/browser/#/?id=9-AEO2020&cases=ref2020&sourcekey=0) of nearly 1100 gigawatts in 2019. The AEIA authorizes $165 million annually over five years to research, develop and demonstrate enhanced geothermal technologies, while providing financial assistance for state, local and tribal governments, as well as nonprofit and other organizations, to deploy traditional geothermal technologies.

[](https://cleantechnica.com/files/2020/03/BLOG-AEIA-ft.jpg)

[T*he American Energy Innovation Act*](https://www.energy.senate.gov/public/index.cfm/american-energy-innovation-act-aeia) authorizes funding for new clean energy research and development, including marine and hydrokinetic energy. Photo by Ian Gagnon/[*Department of Energy*](https://www.energy.gov/)

Additionally, the AEIA authorizes $320 million over two years to research and develop MHK at economies of scale — which [**the Department of Energy estimates**](https://www.energy.gov/sites/prod/files/2015/12/f27/QTR2015-4N-Marine-and-Hydrokinetic-Power.pdf) could generate approximately 1250–1850 terawatt-hours per year, equivalent to 30-45% of net power generation from 2019 across all fuels in the United States. Geothermal and MHK are potentially large sources of clean energy, and tapping into them requires investments now to lower their cost and promote their deployment.

In a second win for clean energy innovation, the AEIA reauthorizes the Advanced Research Projects Agency-Energy (ARPA-E), which [**has been characterized**](https://www.nrdc.org/experts/despite-trumps-threat-eliminate-arpa-e-success) as a successful engine of innovation since its inception in 2009. AEIA extends the agency through 2025, authorizing another nearly $3 billion to invest in technologies that can improve energy efficiency across all sectors, reduce energy-related emissions and reduce energy imports.

Finally, the clean energy economy [**will require a workforce**](https://www.forbes.com/sites/energyinnovation/2019/04/22/renewable-energy-job-boom-creating-economic-opportunity-as-coal-industry-slumps/#14aa216f3665) to match the scale and pace of deployment. The AEIA authorizes $45 million for a pilot grant program for on-the-job training and apprenticeships in careers related to energy efficiency, renewable energy and grid modernization. The provisions specifically prioritize minorities, women, veterans and individuals transitioning from fossil energy sector jobs — a nod to a [**just transition**](https://www.wri.org/blog/2019/03/planning-just-transition-leaving-no-worker-behind-shifting-low-carbon-future).

#### 2. Better Energy Storage Technology

A noted challenge of an energy system reliant on intermittent renewable energy is energy storage. [**One study estimated**](https://www.nrel.gov/docs/fy13osti/52409-ES.pdf) a flexible energy system requires at least 100 gigawatts in new batteries and other storage, including long-duration storage. To address this, the AEIA incorporates the bipartisan Better Energy Storage Technology (BEST) Act.

The BEST Act aims to encourage grid-scale energy storage in the United States by authorizing $270 million per year through 2024 in research, development, demonstration and other regulatory incentives programs. This includes storage solutions for buildings, transportation and the power grid. It also establishes technical and planning assistance for electricity cooperatives and utilities to procure energy storage systems.

#### 3. Modernizing the Electricity Grid

Bringing all that clean energy and storage onto the national electricity grid requires new investments in planning and infrastructure. The AEIA takes the first step by authorizing research and demonstration in two key areas, in addition to grid storage.

The first area is performance improvements to the power distribution systems across the country that would help grid operators demonstrate they can integrate and operate multiple forms of energy and storage technology with efficiency and flexibility. The second priority is in microgrid and hybrid renewable-conventional energy systems — acknowledging that the grid of the future will be a mosaic of interconnected and stand-alone power systems that need to provide clean and reliable energy. Under the AIEA, the federal government would provide state, local and tribal governments with support in demonstrating the feasibility of microgrid and hybrid systems.

#### 4. Carbon Removal and Sequestration

The United States cannot reach net-zero greenhouse gas emissions by the middle of this century (which scientists say is necessary to limit the worst impacts of climate change) without both deeply cutting emissions and [**removing emissions from the atmosphere**](https://www.wri.org/blog/2020/01/5-ways-us-government-can-kickstart-carbonshot-remove-carbon-atmosphere). This involves developing and deploying technology that can capture emissions before they enter the atmosphere, remove carbon dioxide or other greenhouse gas directly from the air, and store or utilize the captured carbon.

The AEIA contains provisions to advance this development. It would authorize $600 million for a carbon storage program aimed at the discovery of natural rock formations underground suitable for large-scale sequestration of gas. It would establish a carbon utilization program to demonstrate novel uses for carbon dioxide in commercial and industrial products. Lastly, it would authorize a program to develop and demonstrate technologies and strategies to remove carbon dioxide from the atmosphere — known as direct air capture — at scale. While direct air capture has no theoretical upper bound, [**one WRI study estimates**](https://wriorg.s3.amazonaws.com/s3fs-public/carbonshot-federal-policy-options-for-carbon-removal-in-the-united-states_0.pdf) it could capture between 200 and 1,400 megatons of carbon dioxide per year by 2050 with the right federal policies in place.

The key question will be whether the technologies that come from these programs become cost-effective for large-scale deployment, and capture carbon at a rate high enough to reach net-zero emissions in time. Some technologies are at the research and development stage; others are just being deployed and are likely to become cheaper as they scale up and incorporate early lessons. Some of the most promising applications are in industries like cement and steel where options for reducing emissions are more limited.

In the U.S. power sector, there are a wide variety of options for decarbonizing electricity generation that are likely to be more cost-effective than retrofitting fossil fuel plants with carbon capture technology. On the other hand, there are many recently-built fossil fuel power plants in Asia that may need to be retrofit with carbon capture. A research and development program could position U.S. firms to provide that technology, enhance U.S. competitiveness and support global decarbonization.

#### 5. Industrial Emissions and Manufacturing

Emissions from the industrial sector cannot be ignored. In 2018, this sector accounted for [**22% of emissions**](https://www.epa.gov/ghgemissions/draft-inventory-us-greenhouse-gas-emissions-and-sinks-1990-2018) in the United States — driven by the use of fossil fuels for energy and emissions from chemical, manufacturing and other industrial processes. While the AEIA will not itself drive deep decarbonization of the sector, it could set the foundation of a program to do that in the future. It would establish the Industrial Emissions Reduction Technology Development Program for the research, development, demonstration and commercial application of technologies that reduce emissions in the industrial sector.

Related, successfully decarbonizing the U.S. economy requires additional decentralized support and capacity-building for industry. Universities and national laboratories could provide innovation hubs. In this spirit, the AEIA would also establish the “Future of Industry” and “Sustainable Manufacturing” programs, as well as industrial research and assessment centers across the country. These federally funded programs at universities would provide research, development and training for alternative energy, efficiency and sustainable solutions for manufacturing, industry, supply chains and energy systems.

### Concerns for Decarbonizing the U.S. Economy

#### 1. Benchmarks Needed for Fossil Fuel Investments

Despite the strong emphasis of this bill on clean energy, efficiency and lower emissions, some provisions could result in investment in fossil technologies that are not consistent with a deeply decarbonized economy. For instance, the AEIA would authorize $4 billion — one of the largest authorizations in the bill — to a new Coal and Natural Gas Technology Program whose goal would be to “ensure the continued use of the abundant domestic coal and natural gas resources through the development of transformational technologies that will significantly improve the efficiency, effectiveness, costs, and environmental performance of coal and natural gas use.”

While the federal government should continue investing in next generation technologies, benchmarks are needed to ensure that those investments do not simply double down on high-carbon technologies that will eventually be stranded assets. Such could also be the fate for AEIA provisions that expedite the import and export of small-scale liquified natural gas — which has a sizable greenhouse gas footprint — or a study for building ethane and other petrochemical infrastructure near Appalachian oil and gas deposits.

#### 2. Energy Efficiency is a Missed Low-hanging Opportunity

Energy efficiency is a central tenet of any serious plan to decarbonize the U.S. economy. There is little rationale that energy efficiency is not featured more in this bill, given the associated energy and cost savings, and emission reductions for governments, businesses and households. The [**federal government has numerous levers**](https://www.wri.org/publication/international-efforts-increase-energy-efficiency-opportunities-advance-energy-united-states) to ensure the market takes advantage of these benefits, including equipment performance standards; tax and fiscal incentives; technical assistance; public procurement; and funding for research, development and deployment.

For example, the Energy Savings and Industrial Competitiveness Act of 2019 is one of the bills that informed the AEIA. While many of the industrial sector provisions survived, what didn’t were provisions to develop stronger building energy codes and to support states and local governments in implementing better codes. Considering the lifetimes of buildings can reach a hundred years, efforts are needed now that set a floor of efficiency for new and existing buildings before more fossil fuels emissions are locked into U.S. communities.

When efficiency has the potential to [**cut U.S. emissions in half by 2050**](https://www.aceee.org/research-report/u1907), more meaningful investments are needed across industry, buildings and homes, appliances and equipment, and electricity distribution.

### More is Needed, Including Appropriations

While it doesn’t lay down the complete path to decarbonization, the 500-page AEIA contains provisions that could move the needle on U.S. energy and emissions, including on energy efficiency, renewable energy, energy storage, carbon capture, grid modernization and other relevant topics.

Additional proposed amendments — [**despite tenuous prospects**](https://www.eenews.net/eedaily/2020/03/04/stories/1062510929) — would strengthen the Act’s climate impact, including a set of clean energy tax credits for renewable energy, electric vehicles and storage, as well as a bipartisan bill to phase out the strong greenhouse gases called hydrofluorocarbons. There are several additional parliamentary hurdles to get the bill through the Senate, the House and a Conference Committee — not to mention appropriating new funding.

This all means the AEIA will likely look different before it could become law and not everything will be funded to a level of effectiveness. Still, in a time of renewed optimism and debate on climate and energy legislation, this Act may be another bright spot where the partisan logjam has broken. It sets in place several meaningful building blocks to put the United States economy on a path to deep decarbonization.

# This Trend Will Reshape Power Generation In The Coming Decades

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The decarbonization of electricity production around the world today may be seen as part of a technological shift. Everyone wants electricity or its immediate benefits like cell phone charging. And until relatively recently, most consumers didn’t care how it was produced as long as it was affordable and accessible. But environmental or political movements aside, we are also witnessing a technological shift. The production of electricity on a commercial or wholesale scale is moving away from big-and-complicated machines and systems to small-and-less complicated forms of production. This implies no more gigantic projects that take 10 years to complete with costs that tally into the tens of billions. What’s interesting is that we seem to be witnessing a reversal of the idea of economies of scale with respect to both production of electricity as well as the optimal size of the distribution grid itself. This seems like a fairly radical departure that may shape the industry for decades.

Years ago, we had a discussion with one of the last centuries most fabled engineers. We asked, “If economies of scale really prevail was that a good reason to upsize electric power plants?” He replied that economies of scale did in fact prevail and utilities should go forward with big projects as long as they were certain about four key aspects relating to the project: 1) the ultimate completion costs; 2) duration of construction; 3) total capital costs (equity plus debt); and 4) expected market or demand for electricity at time of completion. What this asks, to borrow a phrase is, if you build it will they come—at the prices you ultimately have to charge?

Our readers know that recent nuclear new build has pretty much failed thoroughly on points one through three. And bringing it up in this context feels like piling on at this point. But this past week also saw the cancellation of a proposed gas fired base load project by a wholly reputable builder. Somehow this feels different in that perhaps we can no longer assume base load natural gas will be the bridge fuel as we transition away from fossil fuel based electricity production. With these facts in mind, we believe the concept of economies of scale for utilities might be ripe for revision. A recent study by a sextet of European and Canadian academics supported this view (Science, 3 April 2020) by examining the trade-offs of costs versus complexity concluding that in their terms granularity has advantages over lumpiness.

[**Premium: A Global Oil Cartel?**](https://oilprice.com/Energy/Energy-General/A-Global-Oil-Cartel.html)

Our take on the key, statistically significant findings, from a business standpoint:

- Risk of cost overrun is smaller for small projects and that should reduce their cost of capital.

- Smaller projects generally have shorter lifetimes and that leads to more rapid modernization of asset base and lower cost per unit of capacity.

- Small projects are less complex technologically and that leads to lower costs.

- Small projects create more jobs.

- Unit cost per kw rises with size for both energy supply and energy end use projects.

In a detailed analysis made for presentation at a regulatory conference this spring now cancelled (to be found on blog page, [lenhyman.com](http://lenhyman.com/)), we argued total decarbonization of electricity production would spur a rather large increase in industry capital expenditures but at a cost that would have little adverse impact on consumers. In our evaluation we did not consider that reduction in technological size or scale would lead to lower overall costs or— and this is vital— lower cost of capital. As we go forward capital cost becomes even more important given the size of contemplated industry expenditures as well as the eventual disappearance of fossil fuel as an operating expense entirely. Even if the findings only applied to cost of capital, savings would be significant. We calculate that a one percentage point reduction in pretax cost of capital reduces prospective electricity prices five percent in twenty years assuming the transition to decarbonization were completed by then.

How would we translate these findings into more concrete business policy? Decarbonization technology creates business benefits for two obvious reasons—it’s cleaner and cheaper (with zero fuel costs). And there is the possibility of reaping these benefits at far smaller, less capital intensive scale. The bigger is better/economy of scale thinking still pervades much US utility industry thinking and capital planning. This seems to be changing slowly. What we believe accelerates this change is a growing recogition that the traditional concept of a spoke and hub grid system is simply no longer necessarily an optimal business model.

By Leonard Hyman and William Tilles

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# Are Flow Batteries The Future Of Energy Storage?

By [Irina Slav](https://oilprice.com/contributors/Irina-Slav) - Apr 12, 2020, 10:00 AM CDT

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Rows of huge tanks full of chemical solutions storing energy generated from massive solar and wind farms and powering whole cities: It’s a landscape that millennials might very well equate with the new normal.

Batteries will power this new paradigm, and they won't necessarily all be lithium-ion batteries. The flow battery is staking a claim in the renewable energy world of the future.

What are flow batteries? They are [systems](https://www.solarpowerworldonline.com/2017/12/what-is-a-flow-battery/) of two connected tanks, both containing electrolyte liquids: one with a positively charged cathode and the other with the negatively charged anode, just like a lithium-ion battery. Electricity passes from one electrolyte liquid to the other via a membrane between the tanks.

Rechargeable like lithium-ion batteries, flow batteries have longer lives because the electric current flowing from tank to tank does not degrade the membrane. True flow batteries are also called redox flow batteries, after the two reactions they utilize: reduction, or a gain of electrons, and oxidation, or loss of electrons from electrolyte liquid to electrolyte liquid.

The main problem with redox flow batteries is that the most popular types among them rely on vanadium, which is a costly material. But with all the innovation going on in the battery space, it was only a matter of time before someone announced a breakthrough. Scientists from the University of Southern California [have developed](https://scienmag.com/usc-scientists-develop-a-better-redox-flow-battery/) a redox flow battery that uses cheap, sustainable materials.

What the USC team used was a solution of iron sulfate for one electrolyte and a solution of a compound called anthraquinone disulfonic acid, or AQDS for short. Iron sulphate is cheap and widely available: a waste product from mining. AQDS, for its part, "can be manufactured from any carbon-based feedstocks, including carbon dioxide," according to study co-author Surya Prakash.

Few things can be better than a battery that uses an electrolyte made from carbon dioxide, especially if that battery is cheap to make and has a longer life than a lithium-ion competitor. This longer life is important. If the world is serious about going renewable, we would need long-lasting energy storage systems to supply reliable electricity. Lithium-ion batteries are not particularly long-lasting. The new redox flow battery, according to its authors, can deliver on durability, too.

[**Premium: U.S. Oil Production Has Already Peaked**](https://oilprice.com/Energy/Energy-General/US-Oil-Production-Has-Already-Peaked.html)

"To date there has been no economically viable, eco-friendly solution to energy storage that can last for 25 years," says the lead author of the study, chemistry professor Sri Narayan. "Lithium-ion batteries do not have the long-life and vanadium-based batteries uses expensive, relatively toxic materials limiting large-scale use. Our system is the answer to this challenge. We foresee these batteries used in residential, commercial and industrial buildings to capture renewable energy."

There seems to be [a push to develop](https://www.sciencemag.org/news/2018/10/new-generation-flow-batteries-could-eventually-sustain-grid-powered-sun-and-wind) what some have called a second generation of flow batteries in response to the increase in renewable power generation capacity and plans for a complete renewable shift in some economies.

Flow batteries appear to be much easier to scale for utility-grade energy storage and their developers are now focusing on cheap and abundant materials such as iron-containing compounds as well as eco-friendly, non-corrosive solutions. It sounds like flow batteries could give us the Holy Grail of renewable energy: reliable, long-life storage.

There are already forecasts that flow batteries could overtake lithium-ion tech in the future. One recent report from business intelligence firm IDTechEx, [cited](https://www.energy-storage.news/news/high-safety-level-ease-of-recyclability-makes-flow-batteries-very-promising) by Energy Storage News, noted there was about 70 MW/250 MWh in redox flow battery storage capacity deployed to date, all in medium to large-scale projects. Deployments, however, are set to increase thanks to the batteries' fast response time, scalability, and not least, their much easier recyclability than lithium-ion batteries.

The report confirms an earlier forecast, also [reported](https://www.energy-storage.news/news/flow-batteries-leaders-starting-to-live-up-to-promise-says-navigant) by Energy Storage News, this time from Navigant. The research company noted that despite a slow start, redox flow batteries were now gaining on lithium-ion as the technology advances. It was about time, too. Redox flow battery technology has been live for decades, but its reliance on expensive vanadium was pulling it back from mass adoption.

This is good news because the world will be needing a lot of energy storage once this pandemic is over, and things begin to return to normal, and once we start talking about our carbon footprint again. California alone [will need](https://www.greentechmedia.com/articles/read/california-we-need-1gw-long-duration-storage-by-2026) energy storage capacity of as much as 1 GW by 2026 if it is to hit its renewable power targets. The combination of low cost, reliability, durability, and, very importantly, recyclability of all components, will not go unnoticed.

IDTEchEx [expects](https://www.miningreview.com/battery-metals/the-growing-market-of-redox-flow-batteries-explained/) the redox flow battery market, including the costly vanadium-suing batteries, to grow at an impressive annual rate of 30 percent over the next few years. This should sound an alarm with lithium-ion battery developers. Times may well be a-changin' for the dominant battery technology.

# The Ocean Could Be The Ultimate Renewable Energy Source

By [Alex Kimani](https://oilprice.com/contributors/Alex-Kimani) - Apr 02, 2020, 7:00 PM CDT

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For all their hype as the biggest and final frontier in clean energy production, tidal and wave power have never quite lived up to their potential. The IEA estimates that we harnessed[just 1.2TWh of energy](https://www.iea.org/reports/tracking-power-2019/ocean-power) from the world’s vast oceans in 2018--a minuscule fraction of the ~170,000TWh in global primary energy consumption.  This sad situation is not for lack of trying, though.

More than 70 companies have[developed](https://setis.ec.europa.eu/system/files/2014%20JRC%20Ocean%20Energy%20Status%20Report.pdf) various technologies to generate electricity from ocean tides or the kinetic power of waves, leading to [global ocean energy production rising tenfold](https://www.esi-africa.com/industry-sectors/renewable-energy/ocean-energy-production-surges-tenfold-over-last-decade/) over the last decade. Yet, most never advance past the pilot stages into full commercialization.

The sad tale of the leader in the space, Ocean Power Technologies Inc (NASDAQ: OPTT), serves as a sobering reality of the enormous challenge of turning an interesting science project into a profitable business venture. Ocean Power--a company mostly kept alive by government largesse--has crashed 99% over the past three years as it threatens to join the trash heap of tech companies that have experienced more false dawns than Groundhog Day.

But some experts now believe that the time for a Blue Energy revolution has come and new developments in the space could flip the script.

The [Ocean Energy Systems](https://www.ocean-energy-systems.org/) (OES), an offshoot of the[International Energy Agency](https://www.iea.org/), has been working round the clock to pool all the research it can in a bid to achieve large-scale ocean power deployment in the near future.

[](https://d32r1sh890xpii.cloudfront.net/tinymce/2020-04/1585867599-o_1e4uh63um19i2ilrf3dh01sgn8_large.jpg)

Source: CNN Money

**Riding the Tidal Wave**

The 24-member OES, including the U.S., China, most E.U. nations, and India, believes ocean power has the potential to become the Holy Grail of renewable energy due to its sheer potential.

The International Renewable Energy Agency (IRENA), an organization that promotes the widespread adoption and sustainable use of all forms of renewable energy, reckons ocean power has the [potential to generate more electricity](https://www.irena.org/documentdownloads/publications/wave-energy_v4_web.pdf) than either solar or wind power.

According to IRENA, 2% of the world’s 800, 000 kilometers of coastline exceeds a wave power density of 30 kilowatts per meter (kW/m), with an estimated global technical potential of about 500-gigawatt electrical energy (GWe) based on a conversion efficiency of 40%. In other words, by just utilizing 2% of our coastlines, we can generate 4,383TWh of ocean power annually, enough to meet 16.4% of the world’s electricity needs. The U.K. and U.S. have said ocean energy could [provide 20 and 15% of their electricity consumption](https://www.technologyreview.com/s/537656/why-hasnt-tidal-power-taken-off/), respectively.

[**Related: What Happens If You Can’t Pay Your Electricity Bill?**](https://oilprice.com/Energy/Energy-General/What-Happens-If-You-Cant-Pay-Your-Electricity-Bill.html)In comparison, all renewable sources combined accounted for ~11% of the United States’ energy consumption in 2018.

Despite the vast potential, only Scotland currently generates any meaningful amounts of ocean power.

Scotland has enormous potential thanks to its impressive archipelago of islands with heavy tidal currents that can be easily tapped. Located in the Northern territory of the U.K., the nation now boasts the largest tidal array of underwater turbines in the world. Scotland’s tidal turbines have even exceeded expectations, with[the MeyGen company](https://simecatlantis.com/projects/meygen/) now planning to increase the number of installations vastly.

Other leading countries developing ocean power technologies are Canada and the United Kingdom, both endowed with some of the highest tides anywhere in the world. Canada has a number of tidal energy schemes along its Atlantic coast, primarily in Nova Scotia, where scores of competing companies are testing various prototypes. The U.K. has more than 20 of these projects in the pipeline, some still in the research and development stage, but many now being scaled up for deployment.

Meanwhile, China encourages tidal stream energy by offering a generous feed-in tariff 3x the price of fossil fuels. That’s similar to the rate deployed by countries that are trying to launch solar and wind power. The incentive is high enough that one Chinese company is already feeding ocean power into the main grid profitably.

**Ocean Energy Benefits**

Ocean power comes with some distinct advantages.

First off, it’s clean and compact, featuring higher energy density than either solar and wind projects. For instance,[Sihwa Lake Tidal Power Station](https://www.hydropower.org/blog/technology-case-study-sihwa-lake-tidal-power-station) in South Korea, the world’s largest tidal project with an installed capacity of 254MW, was easily added to a 12.5km-long seawall that was built in 1994 to protect the coast against flooding. Compare that to the 781.5MW [Roscoe wind farm](http://www.solaripedia.com/13/163/1482/roscoe_wind_farm.html) in Texas, which takes up 400km2 of farmland, or the 150MW-Fowler Ridge wind project in Indiana that sits on a 202.3km2 parcel of land.

Even solar farms are usually bigger, such as the Bhadla Industrial Solar Park in Rajasthan, India, that is spread across 45km2 of land or the Tengger Desert Solar Park in China that covers 43km2 This means that even smaller countries with long enough stretches of coastline can use tidal power to compete with bigger, land-rich countries such as the U.S., China and India that can afford to dedicate large tracts of land for solar and wind projects.

Second, tidal power is much more predictable than either solar or wind, which can be extremely intermittent.

Finally, the equipment used in ocean power deployments such as tidal barrages are long-lived concrete structures that can have life spans up to 4x longer than typical solar or wind farms. The La Rance in France, for example, has been operational since 1966 and remains in good working order with 240MW generation capacity.  
  
So, what’s stopping the rest of the world from jumping into the Blue Energy bandwagon?

**The Cost Barrier**

Money always gets in the way.

The challenges of harnessing tidal and wave power, though, can be daunting.

Tidal power projects hold some of the loftiest up-front price tags in the renewable energy sector. The aforementioned La Rance cost 620 million francs back in 1966, or more than a billion dollars today after adjusting for inflation while Sihwa Lake Tidal Power Station cost $560m. The proposed [Swansea Bay Tidal Lagoon project](http://www.tidallagoonpower.com/projects/swansea-bay/) in the U.K. has been priced at £1.3bn ($1.67bn).

In comparison, The Tengger Desert Solar Park costs around $530m--roughly the same cost as Sihwa for 3.3x as much power. Likewise, the Roscoe Wind Farm cost around $1bn for an output of 781MW, about 1.7x better cost efficiency than Sihwa Lake. Although the long-term generation costs of ocean power projects are relatively good compared to other renewable energy systems, the initial construction costs can make them unachievable for poorer nations.

The second big challenge is the lack of sufficient research. One reason why Ocean Power Technologies has been going nowhere is mainly because it dedicates so little money to R&D. The $3.3M (market cap) company has racked up more than $200 million in debt since its founding in 1984 and spends ~$1.3 million a quarter on R&D. Many tidal power technologies are simply not deployable on an industrial scale, thus limiting the expansion of the energy system.

Of course, this is exactly what OES is trying to change through concerted R&D efforts between nations.

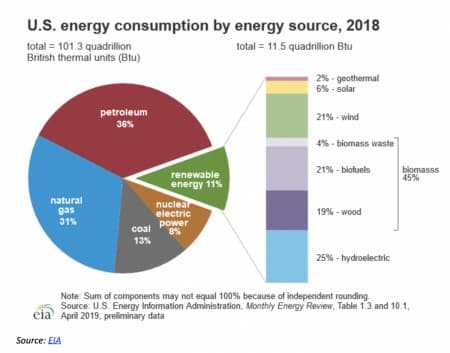
**Bright Future**

The OES has identified several challenges centered around affordability, reliability, operability, installability, standardization, funding availability, and capacity building that will require to be solved before ocean power can become a mainstream renewable energy source.

[**Related: Oil Market Chaos Has Created The Greatest Trade In Decades**](https://oilprice.com/Energy/Crude-Oil/Oil-Market-Chaos-Has-Created-The-Greatest-Trade-In-Decades.html)

The organization, in particular, emphasizes the need for significant cost reductions required for ocean energy technologies to compete successfully with other low-carbon technologies. The European target is to get tidal stream energy down to €0.10 per kilowatt-hour and wave power down to €0.15 by 2030, which would also make them competitive with fossil fuels if these traditional sources were obliged to pay for capture and storage of the carbon dioxide they generate.

Unfortunately, the United States has no tidal power plants mainly because it lacks an abundance of sites where the technology can be economically harnessed. The country will have to be content with other low-carbon technologies such as [solar, wind, and biofuels](https://www.eia.gov/energyexplained/renewable-sources/) where it has better competitive advantage.

[](https://d32r1sh890xpii.cloudfront.net/tinymce/2020-04/1585867495-o_1e4uh304ngpf123p1ae3dj51qfo8_large.jpg)

Source: [EIA](https://www.eia.gov/energyexplained/renewable-sources/)

By Alex Kimani for Oilprice.com

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* **Henry Hewitt**onApril 03 2020said:

Thanks Alex,  
  
You note that: 'Ocean power comes with some distinct advantages.'  
  
However, ocean power comes with some distinct disadvantages, and they are crucial. Given the beating the equipment takes and the salt that comes with it, the engineering requirements are extremely robust, strenuous and thus expensive.  
  
That the medium, water, is denser than air is certainly a plus, however, this pales in comparison to the winning hand that has been dealt to wind, which is the cube of the velocity. And that is checkmate. All the downside problems because of the beating and corrosion and none of the upside that 20-, 30- and 40 knot winds give you, in some places 40 percent of the time or more.  
  
It is unlikely that this will ever amount to much other than in certain special places, rather like a dam which requires a river. Offshore wind, even floating arrays, is the ticket and this is where our attention and hopes should lie. There is more than enough wind to suit our needs.  
  
'Now sits the wind fair, and we will aboard'.

# Oil Price Crash Opens A Window Of Opportunity For Renewables

By [Tsvetana Paraskova](https://oilprice.com/contributors/Tsvetana-Paraskova) - Mar 26, 2020, 5:00 PM CDT

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Just a month ago, companies and investors had a financial incentive to continue investing in new oil and gas projects despite the societal and environmentalist backlash against fossil fuels.    Not anymore.

In just a couple of weeks, the oil price crash made investments in renewable energy starting to look more attractive. Or at least as attractive as investment in oil and gas.

The oil price collapse and the expected economic depression as a result of the coronavirus pandemic—as analysts are now warning of depression rather than recession in many major economies—could [slow down the uptake](https://oilprice.com/Energy/Oil-Prices/Coronavirus-Could-Derail-The-Electric-Vehicle-Revolution.html) of electric vehicles (EVs).

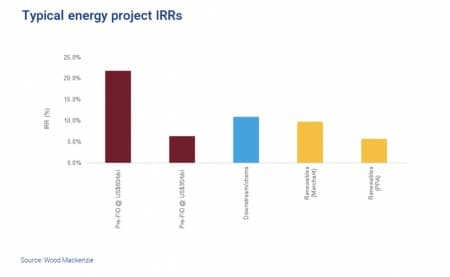
Yet, history suggests that investments in renewable energy, especially wind and solar, are not expected to take a major hit during an oil price collapse, analysts say.

**Lower oil prices mean lower returns on fossil fuel projects**

What is more, the internal rate of return (IRR) on clean energy investment is now comparable to investments in oil and gas projects at $35 [Brent Crude](https://oilprice.com/oil-price-charts/46) price, Dr Valentina Kretzschmar, Vice President, Corporate Research at Wood Mackenzie, [wrote](https://www.woodmac.com/news/opinion/could-clean-energy-be-the-winner-in-the-oil-price-war/) in an opinion piece this week.

Average returns for wind and solar are typically in the 5-10 percent range. Oil and gas project returns, at $60 oil, are 20 percent on average.

[**Related: World’s Largest Oil Trader Says Demand Could Plummet By 20 Million Bpd**](https://oilprice.com/Energy/Crude-Oil/Worlds-Largest-Oil-Trader-Says-Demand-Could-Plummet-By-20-Million-Bpd.html)At $35 oil, however, the average IRR for oil and gas projects slumps to the renewables return range—5 to 10 percent, according to Wood Mackenzie.

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(Click to enlarge)

The low oil prices will severely constrain cash flows for Big Oil, which [switched back to survival mode](https://oilprice.com/Energy/Energy-General/Oil-Majors-Are-Preparing-For-10-Oil.html) just four years after the previous oil price collapse. At $30 oil, the majors [may find it hard to fulfil their commitment](https://oilprice.com/Energy/Energy-General/Can-Big-Oil-Still-Fund-Its-Renewable-Energy-Push.html) to be part of the solution, not the problem, in the energy transition.

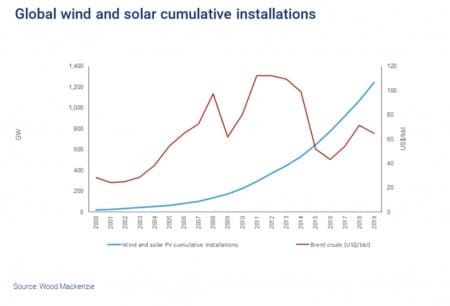
**Renewables Rise Regardless Of Oil Prices**

Unfortunate as this is for Big Oil’s just-announced pledges to curb emissions and invest more in alternative energies, fortunate for the renewables sector is the fact that oil majors are not the biggest investors in the world’s solar and wind market.

According to WoodMac’s Kretzschmar, oil and gas firms combined account for less than 2 percent of the world’s installed wind and solar capacity, and “Even if Big Oil stopped investing in renewables altogether, that would have a minor impact on growth.”

[**Related: US Oil Turns Its Back On The Permian As Prices Crash**](https://oilprice.com/Energy/Energy-General/US-Oil-Turns-Its-Back-On-The-Permian-As-Prices-Crash.html)

Global capacity installations of wind and solar capacity have not been correlated with the price of oil, and even in the previous price crash of 2015-2016, renewable energy installations continued to grow, WoodMac’s estimates show.

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In short, the rise of renewables didn’t slow down even when oil prices collapsed from over $100 a barrel in 2013 to below $40 in 2016.

**Price Crash May Force Big Oil To Review Emission-Reduction Spending…**

Following this month’s price crash, Big Oil’s immediate thoughts will be to preserve dividend payments with negative cash flows at $30 oil. So they are slashing CAPEX and deferring investments in basically every part of their portfolios.

“All discretionary spend will be under review – that includes additional budget allocated for carbon mitigation,” WoodMac’s Kretzschmar said.

According to Wood Mackenzie’s [corporate analysis team](https://www.woodmac.com/news/the-edge/coping-with-negative-cash-flow/), the oil majors Exxon, Chevron, Eni, Shell, BP, Total, and Equinor have an average corporate cash flow break-even price of $53 a barrel for 2020. If Big Oil aims to achieve cash flow neutrality at $35 Brent Crude this year, it would need to slash total spending by 41 percent compared to 2019, according to WoodMac’s analysts.

**…But It Opens A Window Of Opportunity For Renewables**

Big Oil will have to choose which capital allocation to cull in the shortest term to cope with the extreme oil market volatility. But for the players heavily invested in renewable energy, this heightened volatility and increased uncertainty in oil is an opportunity to boost investments in wind and solar power for small, but stable, returns.

“Oil market volatility is unlikely to have a significant impact on renewable energy plans and investments,” Francesco La Camera, Director-General at the International Renewable Energy Agency (IRENA), said in a [statement](https://www.irena.org/newsroom/pressreleases/2020/Mar/IRENA-Director-General-Statement-on-oil-prices-and-impact-on-the-renewable-energy-sector) this month, commenting on the oil price collapse and its impact on renewables.

The low oil prices, and by extension, gasoline prices, could slow the EV adoption, but the “oil price volatility may undermine the viability of unconventional oil and gas resources as well long-term contracts, providing a window of opportunity to reduce or redirect fossil fuel subsidies towards clean energy, while minimizing the potential of social disruption,” La Camera said.

The coronavirus pandemic is disrupting all supply chains right now, including [renewable energy targets](https://oilprice.com/Latest-Energy-News/World-News/Booming-US-Solar-Industry-Hit-By-Coronavirus-Pandemic.html) and deadlines for capacity installation. But the second oil price collapse in just five years is a point for the camp of analysts and experts who argue that lower but more stable returns from renewables is the way to go in the energy transition.

Experts at the Atlantic Council Global Energy Center [say](https://www.atlanticcouncil.org/blogs/new-atlanticist/the-implications-of-the-coronavirus-crisis-on-the-global-energy-sector-and-the-environment/) that the COVID-19-induced global downturn and potentially low-for-longer oil prices could hamper the energy transition in the short term as governments will be focused on protecting their economies and consumers from the recession/depression.

But the pressure for decarbonization will not go away once all this chaos is over – it could even intensify calls for ditching fossil fuels in an increasingly volatile and politically-charged global oil market. This would be an opportunity for increased investment in renewables.

Ragnheiður Elín Árnadóttir, senior fellow, Global Energy Center, Atlantic Council, commented:

“[A]s history demonstrates, innovation will thrive at this time of crisis, and this time may provide an opportunity to explore the use of renewable energy and take the leap into the next generation of technologies.”

By Tsvetana Paraskova for Oilprice.com

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# IEA Calls For Emergency Clean Energy Aid Package

By [Nick Cunningham](https://oilprice.com/contributors/Nick-Cunningham) - Mar 17, 2020, 6:00 PM CDT

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The coronavirus pandemic will almost certainly trigger a global [economic recession](https://www.bloomberg.com/news/articles/2020-03-17/morgan-stanley-economists-say-global-recession-now-base-case), and the recession may have already started with major economies grinding to a standstill.

The U.S. government has rapidly lurched from rather paltry containment measures last week to nearly full-blown lockdown orders at the state level, with restrictions multiplying each day. Similarly, the pressure in Washington to act on the economy is mounting, and politicians in both parties have shifted from circumscribed paid leave proposals, to a major economic stimulus package that could exceed $1 trillion.

As mass quarantine grows, the Overton Window is shifting by the hour. Republicans in Congress have resisted the idea of paid leave. By Tuesday, the Trump administration was looking at around $850 billion in economic aid, but one that would rely heavily on tax credits or exemptions, plus industry-specific bailouts. That idea has received a ton of [criticism](https://www.washingtonpost.com/us-policy/2020/03/17/trump-coronavirus-stimulus-package/) because a payroll tax holiday doesn’t do much for a business that can’t make payroll or an individual who isn’t even on a payroll.

At the same time, the Trump administration was warming to the idea of simply mailing checks to every American. “Americans need cash now,” Secretary of Treasury Steven Mnuchin [said](https://www.axios.com/coronavirus-checks-to-every-american-steven-mnuchin-9ca22bc7-3bd3-4dfb-9702-6e2de39537c5.html). “And I mean now — in the next two weeks.”

When asked how large the checks might be, Mnuchin said that they were working out those details but that it “may be a little bit bigger than what’s in the press.”

Senator Mitt Romney (R-UT) had suggested $1,000. At the time of this writing, a group of Democratic Senators were [proposing](https://www.nytimes.com/2020/03/17/business/stock-market-today.html#link-d9ce0ea) a package that included a $2,000 payment immediately to every individual, to be followed by another $1,500 check in July if the economy was still in bad shape, and then again in October.[**Related: Saudi Arabia’s Oil War Could Bankrupt The Kingdom**](https://oilprice.com/Energy/Energy-General/Saudi-Arabias-Oil-War-Could-Bankrupt-The-Kingdom.html)

The short-term emergency is obvious, and Washington is moving quickly to provide emergency help. But the economic damage could linger, likely necessitating subsequent and perhaps broader stimulus measures.

The executive director of the International Energy Agency, Fatih Birol, said on Saturday that any major economic stimulus package should have a heavy focus on clean energy. He noted that while everyone is rightly focused on the pandemic, the threat of climate change continues to grow.

“These stimulus packages offer an excellent opportunity to ensure that the essential task of building a secure and sustainable energy future doesn’t get lost amid the flurry of immediate priorities,” Birol [wrote](https://www.iea.org/commentaries/put-clean-energy-at-the-heart-of-stimulus-plans-to-counter-the-coronavirus-crisis).

The IEA has long received criticism from environmentalists for favoring fossil fuels, so the full-throated statement for what sounds like a version of the Green New Deal, at a time when the oil and gas industry is in a historical crisis, is remarkable.

It’s also a no-brainer with the global economy heading for a recession. “Large-scale investment” in solar, wind, batteries and other clean technologies “will bring the twin benefits of stimulating economies and accelerating clean energy transitions,” Birol wrote. “The progress this will achieve in transforming countries’ energy infrastructure won’t be temporary – it can make a lasting difference to our future,” he said.[**Related: Is $10 Oil On The Horizon?**](https://oilprice.com/Energy/Energy-General/Is-10-Oil-On-The-Horizon.html)

The solar industry is heading for a crisis as supply chains face substantial disruption and demand takes a hit as projects suffer delays or cancellation. “It’s really across the board a pretty significant crisis in the solar industry in addition to a significant crisis in the overall economy,” Abigail Ross Hopper, president of the Solar Energy Industries Association, told [Reuters](https://www.reuters.com/article/us-usa-solar-report/coronavirus-creating-solar-industry-crisis-us-trade-group-idUSKBN2140F6).

A broad economic recession could morph into a deeper and more prolonged downturn. At the same time, interest rates are near zero, so massive borrowing for a Green New Deal-style program makes sense now more than ever.

Governments around the world already directly or indirectly drive more than 70 percent of global energy investments, Birol noted, so the clean energy transition needs to be “front of mind.” The once-in-a-generation stimulus package that could soon come out of Washington is a “historic opportunity” to “steer those investments onto a more sustainable path,” he said.

“The coronavirus crisis is already doing significant damage around the world,” Birol concluded. “Rather than compounding the tragedy by allowing it to hinder clean energy transitions, we need to seize the opportunity to help accelerate them.”

By Nick Cunningham of Oilprice.com

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# The Ocean Could Be The Ultimate Renewable Energy Source

By [Alex Kimani](https://oilprice.com/contributors/Alex-Kimani) - Apr 02, 2020, 7:00 PM CDT

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For all their hype as the biggest and final frontier in clean energy production, tidal and wave power have never quite lived up to their potential. The IEA estimates that we harnessed[just 1.2TWh of energy](https://www.iea.org/reports/tracking-power-2019/ocean-power) from the world’s vast oceans in 2018--a minuscule fraction of the ~170,000TWh in global primary energy consumption.  This sad situation is not for lack of trying, though.

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The sad tale of the leader in the space, Ocean Power Technologies Inc (NASDAQ: OPTT), serves as a sobering reality of the enormous challenge of turning an interesting science project into a profitable business venture. Ocean Power--a company mostly kept alive by government largesse--has crashed 99% over the past three years as it threatens to join the trash heap of tech companies that have experienced more false dawns than Groundhog Day.

But some experts now believe that the time for a Blue Energy revolution has come and new developments in the space could flip the script.

The [Ocean Energy Systems](https://www.ocean-energy-systems.org/) (OES), an offshoot of the[International Energy Agency](https://www.iea.org/), has been working round the clock to pool all the research it can in a bid to achieve large-scale ocean power deployment in the near future.

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Source: CNN Money

**Riding the Tidal Wave**

The 24-member OES, including the U.S., China, most E.U. nations, and India, believes ocean power has the potential to become the Holy Grail of renewable energy due to its sheer potential.

The International Renewable Energy Agency (IRENA), an organization that promotes the widespread adoption and sustainable use of all forms of renewable energy, reckons ocean power has the [potential to generate more electricity](https://www.irena.org/documentdownloads/publications/wave-energy_v4_web.pdf) than either solar or wind power.

According to IRENA, 2% of the world’s 800, 000 kilometers of coastline exceeds a wave power density of 30 kilowatts per meter (kW/m), with an estimated global technical potential of about 500-gigawatt electrical energy (GWe) based on a conversion efficiency of 40%. In other words, by just utilizing 2% of our coastlines, we can generate 4,383TWh of ocean power annually, enough to meet 16.4% of the world’s electricity needs. The U.K. and U.S. have said ocean energy could [provide 20 and 15% of their electricity consumption](https://www.technologyreview.com/s/537656/why-hasnt-tidal-power-taken-off/), respectively.

[**Related: What Happens If You Can’t Pay Your Electricity Bill?**](https://oilprice.com/Energy/Energy-General/What-Happens-If-You-Cant-Pay-Your-Electricity-Bill.html)In comparison, all renewable sources combined accounted for ~11% of the United States’ energy consumption in 2018.

Despite the vast potential, only Scotland currently generates any meaningful amounts of ocean power.

Scotland has enormous potential thanks to its impressive archipelago of islands with heavy tidal currents that can be easily tapped. Located in the Northern territory of the U.K., the nation now boasts the largest tidal array of underwater turbines in the world. Scotland’s tidal turbines have even exceeded expectations, with[the MeyGen company](https://simecatlantis.com/projects/meygen/) now planning to increase the number of installations vastly.

Other leading countries developing ocean power technologies are Canada and the United Kingdom, both endowed with some of the highest tides anywhere in the world. Canada has a number of tidal energy schemes along its Atlantic coast, primarily in Nova Scotia, where scores of competing companies are testing various prototypes. The U.K. has more than 20 of these projects in the pipeline, some still in the research and development stage, but many now being scaled up for deployment.

Meanwhile, China encourages tidal stream energy by offering a generous feed-in tariff 3x the price of fossil fuels. That’s similar to the rate deployed by countries that are trying to launch solar and wind power. The incentive is high enough that one Chinese company is already feeding ocean power into the main grid profitably.

**Ocean Energy Benefits**

Ocean power comes with some distinct advantages.

First off, it’s clean and compact, featuring higher energy density than either solar and wind projects. For instance,[Sihwa Lake Tidal Power Station](https://www.hydropower.org/blog/technology-case-study-sihwa-lake-tidal-power-station) in South Korea, the world’s largest tidal project with an installed capacity of 254MW, was easily added to a 12.5km-long seawall that was built in 1994 to protect the coast against flooding. Compare that to the 781.5MW [Roscoe wind farm](http://www.solaripedia.com/13/163/1482/roscoe_wind_farm.html) in Texas, which takes up 400km2 of farmland, or the 150MW-Fowler Ridge wind project in Indiana that sits on a 202.3km2 parcel of land.

Even solar farms are usually bigger, such as the Bhadla Industrial Solar Park in Rajasthan, India, that is spread across 45km2 of land or the Tengger Desert Solar Park in China that covers 43km2 This means that even smaller countries with long enough stretches of coastline can use tidal power to compete with bigger, land-rich countries such as the U.S., China and India that can afford to dedicate large tracts of land for solar and wind projects.

Second, tidal power is much more predictable than either solar or wind, which can be extremely intermittent.

Finally, the equipment used in ocean power deployments such as tidal barrages are long-lived concrete structures that can have life spans up to 4x longer than typical solar or wind farms. The La Rance in France, for example, has been operational since 1966 and remains in good working order with 240MW generation capacity.  
  
So, what’s stopping the rest of the world from jumping into the Blue Energy bandwagon?

**The Cost Barrier**

Money always gets in the way.

The challenges of harnessing tidal and wave power, though, can be daunting.

Tidal power projects hold some of the loftiest up-front price tags in the renewable energy sector. The aforementioned La Rance cost 620 million francs back in 1966, or more than a billion dollars today after adjusting for inflation while Sihwa Lake Tidal Power Station cost $560m. The proposed [Swansea Bay Tidal Lagoon project](http://www.tidallagoonpower.com/projects/swansea-bay/) in the U.K. has been priced at £1.3bn ($1.67bn).

In comparison, The Tengger Desert Solar Park costs around $530m--roughly the same cost as Sihwa for 3.3x as much power. Likewise, the Roscoe Wind Farm cost around $1bn for an output of 781MW, about 1.7x better cost efficiency than Sihwa Lake. Although the long-term generation costs of ocean power projects are relatively good compared to other renewable energy systems, the initial construction costs can make them unachievable for poorer nations.

The second big challenge is the lack of sufficient research. One reason why Ocean Power Technologies has been going nowhere is mainly because it dedicates so little money to R&D. The $3.3M (market cap) company has racked up more than $200 million in debt since its founding in 1984 and spends ~$1.3 million a quarter on R&D. Many tidal power technologies are simply not deployable on an industrial scale, thus limiting the expansion of the energy system.

Of course, this is exactly what OES is trying to change through concerted R&D efforts between nations.

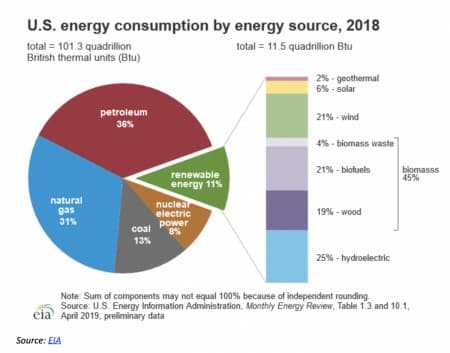
**Bright Future**

The OES has identified several challenges centered around affordability, reliability, operability, installability, standardization, funding availability, and capacity building that will require to be solved before ocean power can become a mainstream renewable energy source.

[**Related: Oil Market Chaos Has Created The Greatest Trade In Decades**](https://oilprice.com/Energy/Crude-Oil/Oil-Market-Chaos-Has-Created-The-Greatest-Trade-In-Decades.html)

The organization, in particular, emphasizes the need for significant cost reductions required for ocean energy technologies to compete successfully with other low-carbon technologies. The European target is to get tidal stream energy down to €0.10 per kilowatt-hour and wave power down to €0.15 by 2030, which would also make them competitive with fossil fuels if these traditional sources were obliged to pay for capture and storage of the carbon dioxide they generate.

Unfortunately, the United States has no tidal power plants mainly because it lacks an abundance of sites where the technology can be economically harnessed. The country will have to be content with other low-carbon technologies such as [solar, wind, and biofuels](https://www.eia.gov/energyexplained/renewable-sources/) where it has better competitive advantage.

[](https://d32r1sh890xpii.cloudfront.net/tinymce/2020-04/1585867495-o_1e4uh304ngpf123p1ae3dj51qfo8_large.jpg)

Source: [EIA](https://www.eia.gov/energyexplained/renewable-sources/)

By Alex Kimani for Oilprice.com

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<https://www.ft.com/content/79b7dc43-da6b-4027-b68f-a177524972b6>  
  
Oil prices rally on growing hopes for Russia-Saudi Arabia pact US president Donald Trump says deal could be agreed within a ‘few days’ Some market analysts say the oil demand collapse is so severe that any supply cuts by major producers would have a limited impact © AFP via Getty Images Save Anjli Raval, Senior Energy Correspondent 49 MINUTES AGOPrint this page25 Brent crude rallied more than 12 per cent on hopes of a supply deal among major oil producers led by Saudi Arabia and Russia to alleviate a price collapse triggered by the coronavirus outbreak.  US president Donald Trump said he had spoken in recent days with the leaders of Russia and Saudi Arabia and believed a deal to end a price war — that has taken Brent to the lowest level since 2002 — would be made in a “few days”. Saudi Arabia had pushed for a deal to deepen and prolong production curbs ahead of a March meeting of oil ministers, but it was met with reluctance by Russia. This prompted Saudi Arabia to pursue a “pump at will” strategy to shock the market, dramatically cutting prices for its crude and raising production to record levels.  “I think that they will work it out over the next few days . . . Both know what they have to do,” Mr Trump told a White House press conference on Wednesday, without giving any further details as to why he was so confident.  The US has put pressure on Saudi Arabia to scale back its supply surge, which has contributed to a price collapse and ricocheted across the shale patch where lots of companies are on the brink of bankruptcy. Mr Trump said he would meet domestic oil executives to discuss measures by which to aid the industry. Brent crude, the international oil benchmark, rose as much as 12 per cent to a high of $27.88 a barrel before paring gains by mid-morning on Thursday to trade at $26.80 — an 8.3 per cent rise. US benchmark West Texas Intermediate, which hit $22.55 a barrel, eased to $21.89 — an almost 8 per cent gain. Saudi Arabia and Russia still back co-operation between producer nations, yet it seems there is little sign of a strategy shift just yet. The kingdom raised production to above 12m barrels a day, its maximum level, on Wednesday.  Saudi Arabia is hiring oil tankers to carry its crude into the global market and has told the state energy company to prepare for a prolonged fight. Saudi Aramco has informed oilfield services contractors to be ready to provide support as it seeks to keep production at heightened levels. Recommended The Commodities NoteAntoine Halff Saudi-Russia oil war is a game theory masterstroke People close to the kingdom say the world’s biggest oil exporter still wants a deal, despite a multiyear oil alliance between Saudi Arabia and Russia coming to an end last month. But any production curbs would need to be shared between all producers, including Russia. “The political hurdles to any supply deal are as large as the balance problem itself,” said analysts at JBC Energy. Some market analysts have said the demand collapse is so severe, amid global lockdowns and travel bans, that any supply cuts from major producers would have a limited impact. The global oil industry is facing its biggest consumption hit in history as people stop using cars and planes, with traders forecasting crude demand could fall as much as 25 per cent next month. Global storage tanks are filling up fast and refiners are turning away additional barrels as demand for refined products — from petrol to jet fuel — takes a hit. With oil prices at these levels, analysts say companies may be forced to shut-in production. WoodMackenzie, a consultancy, says a 10th of world oil production is unprofitable with Brent crude around $25 a barrel.

<https://www.reuters.com/article/us-health-coronavirus-china-sinopec/sinopec-expects-lowers-2020-refining-runs-as-coronavirus-hits-demand-idUSKBN21H07H>

# Sinopec expects lower 2020 refining runs as coronavirus hits demand

[Muyu Xu](https://www.reuters.com/journalists/muyu-xu), [Shivani Singh](https://www.reuters.com/journalists/shivani-singh)

3 MIN READ

BEIJING (Reuters) - Asia’s top refiner China Petroleum Chemical Corp, or Sinopec, expects its full-year 2020 refining runs will be lower than in 2019 because of a contraction in Chinese fuel demand caused by the coronavirus outbreak.

FILE PHOTO: A pumpjack is seen at the Sinopec-operated Shengli oil field in Dongying, Shandong province, China January 12, 2017. REUTERS/Chen Aizhu

The fall in demand will last for the first half of this year and lead to lower full-year demand but refined oil consumption is expected to return to normal in the third and fourth quarters, said Ling Yiqing, vice president of Sinopec, during an earnings call on Monday.

“Due to the impact of the first and second quarters, our expectation of full year consumption of oil products will be negative growth,” said Ling.

“In terms of refining utilization rates in the full year 2020, due to the impact of coronavirus outbreak and exports, our whole year number will be affected,” he said.

State-backed Sinopec lowered the utilization rates at its crude oil refineries to 66% in February amid the outbreak, which was first detected in the central Chinese city of Wuhan and prompted the government to impose stringent travel bans.

The average utilization rate at Sinopec’s oil refineries was 91.3% in 2019.

Ling also said the spread of coronavirus overseas will impact oil product exports, negatively affecting Sinopec’s oil refining in the second quarter.

Inventory of refined oil products was seen at a high level in February at Sinopec, Ling said, but it is expected to fall back to a normal level by end-March.

The company, which will trim 2020 capital expenditure by 2.5%, was making a detailed plan to reduce capex and would report this in April during first-quarter earnings, said Zhang Yuqing, chairman of Sinopec, on Monday.

Zhang expects that oil prices will fluctuate around $42 per barrel, and the low price scenario might remain for a longer-than-expected period.

He added that coal-to-liquids (CTL) and coal chemical projects will not have any competitiveness when oil prices fall below $35 per barrel.

Sinopec, which has three coal-chemical projects, will strive to lower costs this year and work on future planning, Zhang said.

Asia’s largest oil refiner also warned about lower petrochemical output in the coming months as it expects a notable decline in global consumption in the next one to two months.

Sinopec, which had lowered operation rates by 10% at its petrochemical plants in February, has resumed operations to nearly 100%, but it still sees a high level of inventory of petrochemical products, Yu Baocai, a vice president at Sinopec, also told the Monday briefing.

Sinopec’s mainland-listed shares eased 0.7% by midday on Monday but its Hong Kong-listed shares were up around 2%.

Editing by Christian Schmollinger and Jacqueline Wong

*Our Standards:*[*The Thomson Reuters Trust Principles.*](http://thomsonreuters.com/en/about-us/trust-principles.html)

**Keeping the Lights On: US Utility Sector Braces for Coronavirus Impact**

An industry that must stay on its feet to keep homes and hospitals powered faces its own economic and workforce challenges.

[**JEFF ST. JOHN**](https://www.greentechmedia.com/authors/jeff-st-john)**MARCH 17, 2020**



*Utilities may face workforce shortages at a critical time for power supplies.*

Every industry in the world faces dangers and disruptions from the COVID-19 pandemic. Not all of those industries are tasked with keeping the lights on.

U.S. power utilities and generators face an array of risks in the weeks ahead, from energy "demand destruction" as economies slow to tightening debt conditions that could ripple through the commodity markets.

So far, North American utilities have not yet seen the sort of power demand reductions that occurred during China's massive lockdown or those now hitting [European countries](https://www.greentechmedia.com/articles/read/spanish-energy-sector-counts-blessings-in-coronavirus-crisis). But they're likely to start seeing similar impacts soon, according to a [Tuesday update](https://www.woodmac.com/our-expertise/focus/Power--Renewables/coronavirus-power-and-renewables-market-impact-update/) from the Wood Mackenzie Power & Renewables and Energy Transition teams.

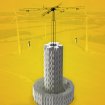
Italy, as one example, saw an 8.1 percent week-on-week decrease in energy demand after the country ordered its citizens to stay at home and forced the closure of all nonessential businesses, as the chart below illustrates. Power demand fell 7.3 percent year-over-year.

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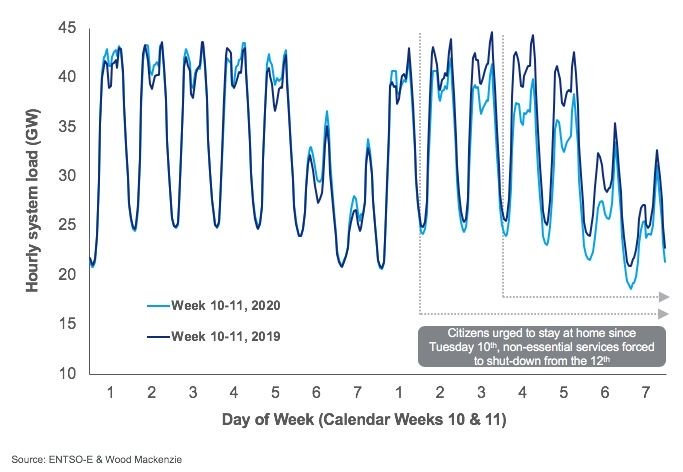
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Depressed demand from commercial and industrial consumers is an obvious source of concern for American electricity companies, particularly in power markets such as Texas' ERCOT where falling oil and natural-gas prices could cripple those industries. Texas is by far the largest U.S. wind market and the No. 2 market for solar behind California, fueled in part by the state's voracious C&I power demand.

In contrast to C&I, residential electricity demand is "relatively more stable under economic distress," WoodMac's report said.

“The key question is how long the situation lingers,” said Dan Shreve, WoodMac's head of global wind energy research*. “*A months-long economic slowdown will likely induce a minor recession and will probably lead to a minor reduction in power demand.”

A growing number of utilities have announced that during the crisis they will stop disconnecting power to customers for lack of payment, including Southern California Edison, Con Edison and Pepco.

**Keeping the power lines humming during a pandemic**

In contrast to most industries, utilities' ability to stay on their feet during the coronavirus pandemic is a matter of national security.

Utilities are among the 16 industries labeled as “critical infrastructure sectors” by the U.S. Department of Homeland Security, marking them for a heightened level of cooperation with — and scrutiny from — government agencies tasked with public safety.

Like many industries, however, utilities may face workforce disruptions or shortages as COVID-19 bites. The Edison Electric Institute (EEI) utility trade group [warned last month](https://www.eei.org/issuesandpolicy/Documents/Electric%20Companies%20and%20Pandemics%20-%20What%20You%20Should%20Know.pdf) that up to 40 percent of utility employees could be out sick, quarantined or at home to care for sick family members as the pandemic spreads.

Southern California Edison has already set up telework for about 8,000 of its 13,000 employees, while the remainder working in the field or in customer-facing jobs are taking steps to keep their distance from the public and disinfect facilities, the utility [reported last week](https://energized.edison.com/stories/sce-offers-bill-help-to-customers-impacted-by-covid-19).

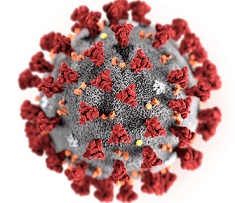
EEI also warned that during the pandemic, “mutual assistance programs” that bring utility workers from across the country to aid those struggling to restore power after storms and natural disasters “may not be available or may be severely limited.”

LONDON (ICIS)--As the coronavirus spreads around the world and countries implement containment measures, energy supply and demand is being disrupted.

European countries like Italy, Spain, France and Austria are imposing lockdowns and heavy measures to limit the spread of the virus. These measures are likely to pressure prompt and near curve contracts, particularly as warmer weather also reduces heating demand.

The impact that country-wide lockdowns and demand slowdowns will have on energy markets will be evolving every day.

Follow this Topic Page to stay up to date at this unprecedented time with expert insight and analysis of the impact coronavirus is having on energy markets.



**LATEST UPDATES**

*27-Mar-20 09:35*

**European power and carbon markets affected by COVID-19 – an early impact assessment**

KARLSRUHE (ICIS)--[In order to assess](https://www.icis.com/explore/resources/news/2020/03/27/10487371/european-power-and-carbon-markets-affected-by-covid-19-an-early-impact-assessment) the fundamental impact of COVID-19 on European power and carbon markets we modelled a scenario in which we accounted for the first data on dropping electricity demand as well as assumed industry production cuts and continued travel restrictions.

*26-Mar-20 07:41*

**India defers on LNG cargoes as lockdown ramps up**

SINGAPORE (ICIS)-[-India buyers are deferring LNG cargoes](https://subscriber.icis.com/news/energy/news-article-00110486833) as ports close operations with strict lockdowns in place. This is a concern for sellers in a long market with India one of the key buyers.

*25-Mar-20 16:08*

**EU to reach 2020 renewables goals on coronavirus, Brexit**

LONDON (ICIS)--The combination of Brexit and lower demand associated with the coronavirus pandemic should enable the EU as a whole as well as many member states to [reach their 2020 renewables targets](https://www.icis.com/explore/resources/news/2020/03/25/10486635/eu-to-reach-2020-renewables-goals-on-coronavirus-brexit), according to ICIS model run.

*25-Mar-20 04:00*

**Global gas markets expecting further weakness during Q2**

• European Q2 gas looks bearish

• US producers eye crude prices

• Indian demand may cut Asian LNG prices

LONDON (ICIS)--Global gas and LNG markets could [come under further pressure in April as major demand centres in both the European and Pacific basins tighten restrictions to tackle to the coronavirus](https://subscriber.icis.com/news/energy/news-article-00110485957).

*24-Mar-20 17:28*

**European power markets yet to hit coronavirus demand floor**

LONDON (ICIS)--[European power demand will continue to drop](https://subscriber.icis.com/news/energy/news-article-00110485954) as governments escalate measures to stem the spread of the coronavirus.

Electricity consumption in Italy and France fell 16% below expectations over the past seven days, according to an ICIS model that controls for the impact of temperatures.

Three other major power markets studied by ICIS - Germany, Spain and the UK - have seen smaller drops, although all are trending down.

*23-Mar-20 17:20*

**Virus demand hit to wipe 9% off 2020 European power prices**

• Power demand drop likely

• ICIS model indicates 6% drop in demand during 2020

• Price fall of 9% across Europe

LONDON (ICIS)--A scenario where power demand drops one-tenth through up to June as a result of measures taken to slow the spread of the coronavirus would see power prices [across European markets](https://subscriber.icis.com/news/energy/news-article-00110485642) fall by an average 9% in 2020.

In this scenario, Germany and France could see as much as €5/MWh wiped off their average power price this year compared to previous expectations, with the UK dropping a more moderate €1.60/MWh, the analysis demonstrated.

*23-Mar-20 17:00*

**Italian power demand to plunge further as factories shut down**

• Demand to enter new phase amid closure of non-essential manufacturing

• PUN Day-ahead to shed value accordingly with demand restrictions

• Italian front-month on track to expire below €25.00/MWh

LONDON (ICIS)--Italy is set for a further slide in its power consumption by 25 March, when all non-essential manufacturing will have to shut down following a decree published [on 22 March](https://subscriber.icis.com/news/energy/news-article-00110485639).

This will likely push Italian power nearer-dated contracts to new record lows amid already weakened power demand.

*23-Mar-20 14:36*

**Weather-driven NBP prompt upside possible in week 13**

• Temperatures across NW Europe to tumble in week 14

• British local distribution zone demand to increase

• EAX-NBP premium gaining

Incoming cooler weather across Britain for week 14 could encourage buying across [NBP prompt and near curve contracts](https://subscriber.icis.com/news/energy/news-article-00110485608) in the coming sessions. The drop in temperatures will likely trigger a spike in heating demand which has also increased due to large numbers of people working from home to curb the spread of the coronavirus.

*20 March 2020, 17:34*

**Southeast Europe braced for falling demand, bankruptcies**

Eastern European and Turkish energy companies are [braced for sharp drops in demand and potential bankruptcies](https://www.icis.com/explore/resources/news/2020/03/20/10484952/see-turkey-braced-for-falling-demand-bankruptcies-amid-emergency-measures-fallout) as countries introduce emergency measures in a bid to contain the coronavirus outbreak.

Although the spread of the virus is not as extensive in this region as in Italy or Spain, the impact of the emergency measures that have been taken is likely to be felt acutely because national economies are fragile.

*20 March 2020, 12:59*

**VIDEO: European gas consumption could plummet to record lows**

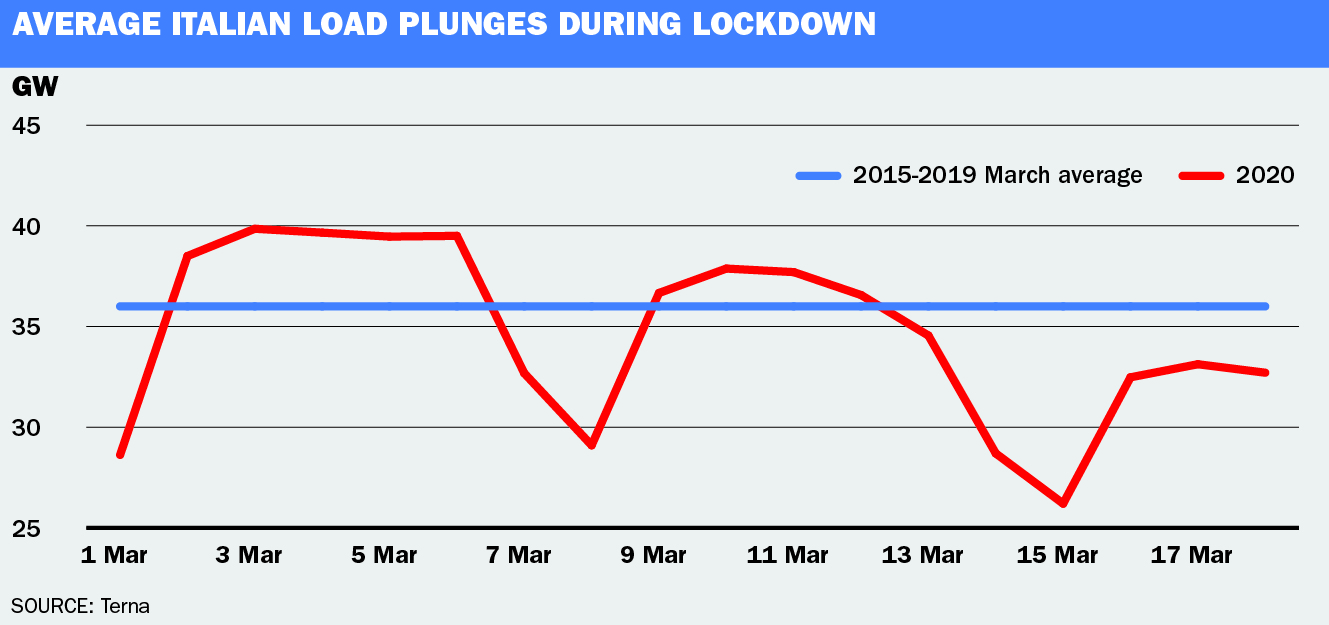
*20 March 2020, 05:35*

**Europe on course for sharp reduction to power demand**

Power sector demand across key European countries is [set for a major slump](https://www.icis.com/explore/resources/news/2020/03/20/10484486/europe-on-course-for-sharp-reduction-in-power-demand) over the coming weeks as countries scale-up their efforts to tackle the spread of the coronavirus.

Demand in Italy, which has been hit the hardest by the outbreak, has dropped 10% compared to its five-year average for March during the second week of its nationwide lockdown.

As measures to tackle the spread of the virus intensifies across other European countries, a similar drop in demand can be expected, although changes are unlikely to be uniform.

**

*19 March 2020, 10.25*

**China's city gas demand steady despite coronavirus, uncertain elsewhere**

The impact of the coronavirus in China has reduced but gas demand will still end March well down from 2019. [City-gate gas demand has been firm](https://subscriber.icis.com/news/energy/news-article-00110483776) but the outlook for other sectors remains a concern.

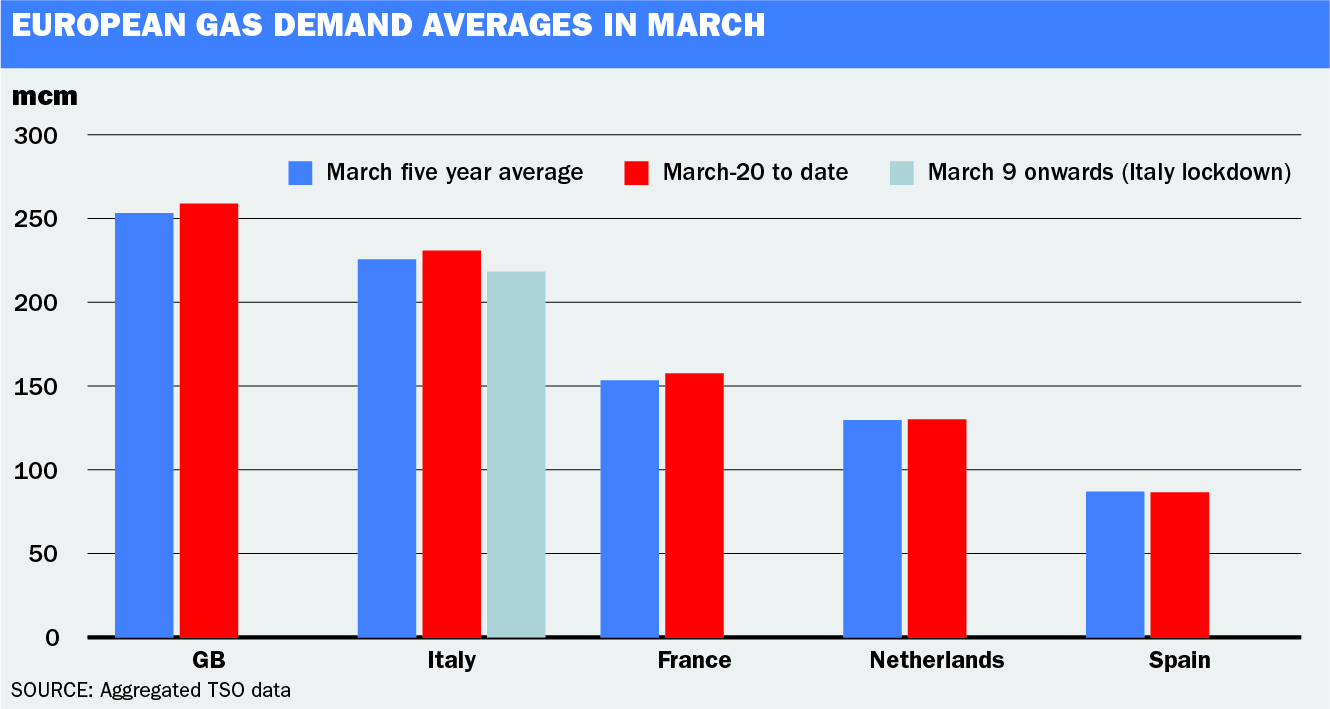
*19 March 2020, 06:00*

**European gas centres set for April demand destruction**

• EU-wide demand [crunch could follow](https://www.icis.com/explore/resources/news/2020/03/19/10483529/major-european-gas-centres-set-for-april-demand-destruction) after lockdowns intensify

• Residential demand to see brief increase before falling on warmer temperatures

• LNG sellers could struggle to deliver into Europe

**

*18 March 2020, 20:50*

**ICIS VIEW: Coronavirus effects to ripple in Mexico**

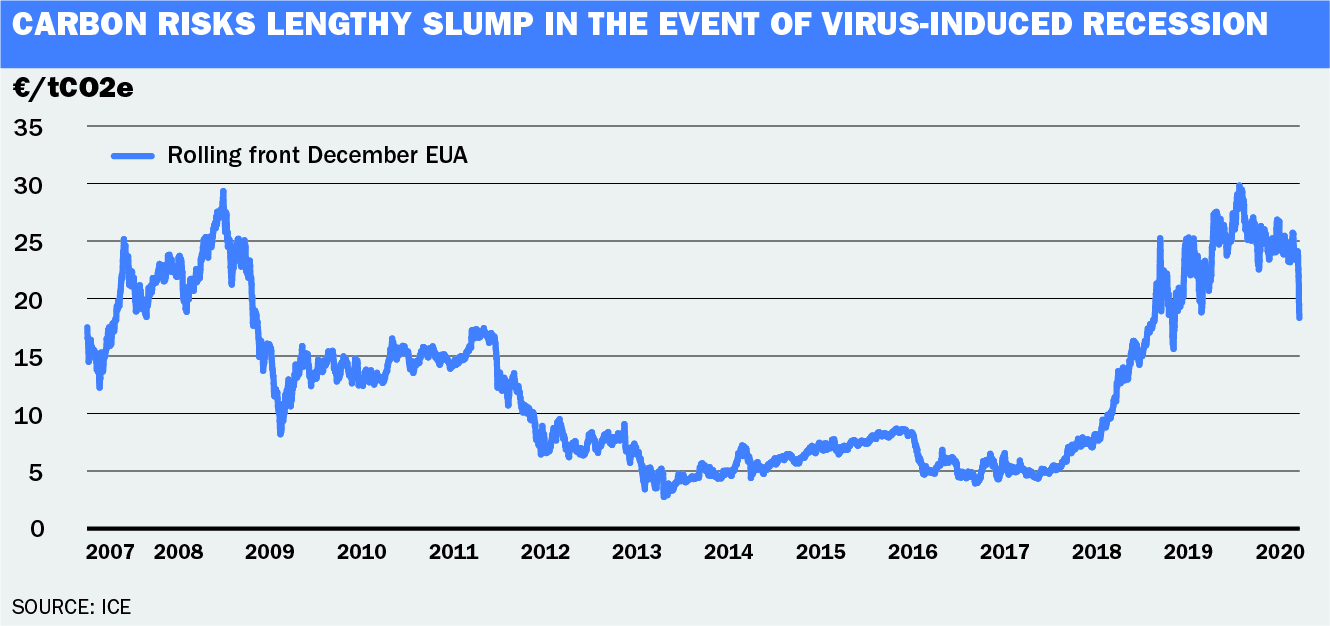
Mexico’s economy has perhaps [never been more exposed](https://www.icis.com/explore/resources/news/2020/03/18/10483585/icis-view-coronavirus-effects-to-ripple-in-mexico) to the global supply chains and commodity markets hit by the shocks of the coronavirus and the oil price war, but its president is losing time engaging in denial and political pandering. These will not help his party’s 2021 election prospects if the country’s economic performance falls further as its currency takes a beating amid capital flight.

*18 March 16:37*

**ICIS VIEW: Clean energy transition will take coronavirus hit**

Disruption caused by the coronavirus is likely to [slow down the implementation of clean energy legislation](https://subscriber.icis.com/news/energy/news-article-00110483508) throughout Europe.

This has the potential to threaten the efficacy of the carbon market, stall the expansion of renewable capacity and slow coal phase out plans.

**

*18 March 2020, 11:39*

**French, Belgian TSOs to ensure supply amid falling demand**

Transmission system operators (TSOs) in Belgium and France have taken steps to [ensure continuity and security of natural gas supply](https://www.icis.com/explore/resources/news/2020/03/18/10483475/french-belgian-tsos-ensure-supply-amid-falling-demand) during the coronavirus outbreak.

*17 March 2020, 17:47*

**LNG shipping in Europe adopts virus protection measures**

With the severity of the coronavirus in Italy, [LNG vessels are now complying](https://subscriber.icis.com/news/petchem/news-article-00110483222) with measures to reduce the risk of further virus spread.

*17 March 2020, 12:29*

**German, French lockdown not priced into Q2 power contracts**

European electricity markets have not priced in the potential lockdown of France and Germany into near curve power products, traders polled by ICIS [said on Monday](https://www.icis.com/explore/resources/news/2020/03/17/10482910/german-french-lockdown-not-priced-into-q2-power-contracts).

17-Mar-20 06:49

**UPDATED: Italian renewable lobbies ask for temporary lift of obligations**

Italian renewable energy associations are in talks with national authorities to [define a strategy](https://www.icis.com/explore/resources/news/2020/03/17/10482736/updated-italian-renewable-lobbies-ask-for-temporary-lift-of-obligations) that could alleviate green producers severely hit by the coronavirus-related lockdown in the country since last week.

*17 March 2020, 06:31*

**China's gas demand rebounds - satellite data**

Emissions of nitrogen dioxide are on the rise in China. This is an indication that economic activity is rising as [businesses and industry ramp up activity](https://subscriber.icis.com/news/energy/news-article-00110482854) with the coronavirus impact subsiding.

*16 March 2020, 18:42*

**ICIS ANALYST VIEW: Spanish virus to impact LNG imports**

Spain is home to one third of Europe’s LNG import capacity, so a lockdown has the potential to [further gum up the global LNG supply chain](https://www.icis.com/explore/resources/news/2020/03/16/10482753/icis-analyst-view-spanish-virus-impact-on-lng-imports) if, as seems likely, it leads to a drop in demand for gas and a reduced ability to support scheduled imports.

*16 March 2020, 17:14*

**Spanish lockdown squashes front month energy prices**

Expectations of plummeting demand in Spain due to a national lockdown [hit the front month power contract](https://www.icis.com/explore/resources/news/2020/03/16/10482744/spanish-lockdown-squashes-front-month-energy-prices) by more than €3/MWh on 16 March.

Spain went into a 15-day nationwide lockdown on Monday, with workers asked to stay home to battle the spread of the coronavirus.

*16 March 2020, 16:30*

**European nuclear plant operators gear up to ensure power supply**

European nuclear power availability is [expected to remain robust](https://www.icis.com/explore/resources/news/2020/03/16/10482719/european-nuclear-plant-operators-gear-up-to-ensure-power-supply) with strict safety measures already being implemented by the major plant operators amid the coronavirus outbreak.

*16 March 2020, 16:14*

**Bulgarian power traders call for nuclear maintenance change**

Bulgaria’s free energy market association ASEP has [called for measures](https://www.icis.com/explore/resources/news/2020/03/16/10482709/bulgarian-power-traders-call-for-nuclear-maintenance-change) to tackle national power market disruption due to the coronavirus outbreak on 16 March.

*16 March 2020, 11:48*

**Global market moves feed energy downside jitters**

Heightened concerns surrounding the economic fall-out from the coronavirus is set to [further weigh on European energy markets](https://www.icis.com/explore/resources/news/2020/03/16/10482705/global-market-moves-feed-energy-downside-jitters), traders say.

*13 March 2020, 15:59*

**Coronavirus likely to lower trader appetite for risk**

Widespread remote working due to the coronavirus is set to [hit European natural gas and power liquidity](https://www.icis.com/explore/resources/news/2020/03/13/10482215/coronavius-likely-to-lower-gas-and-power-trader-appetitive-for-risk), according to traders.

A number of firms have already asked traders to work from home or are expected to do so.

While some trading activities around gas and power dispatching need to be done from a trading floor, most other tasks can be done from home.

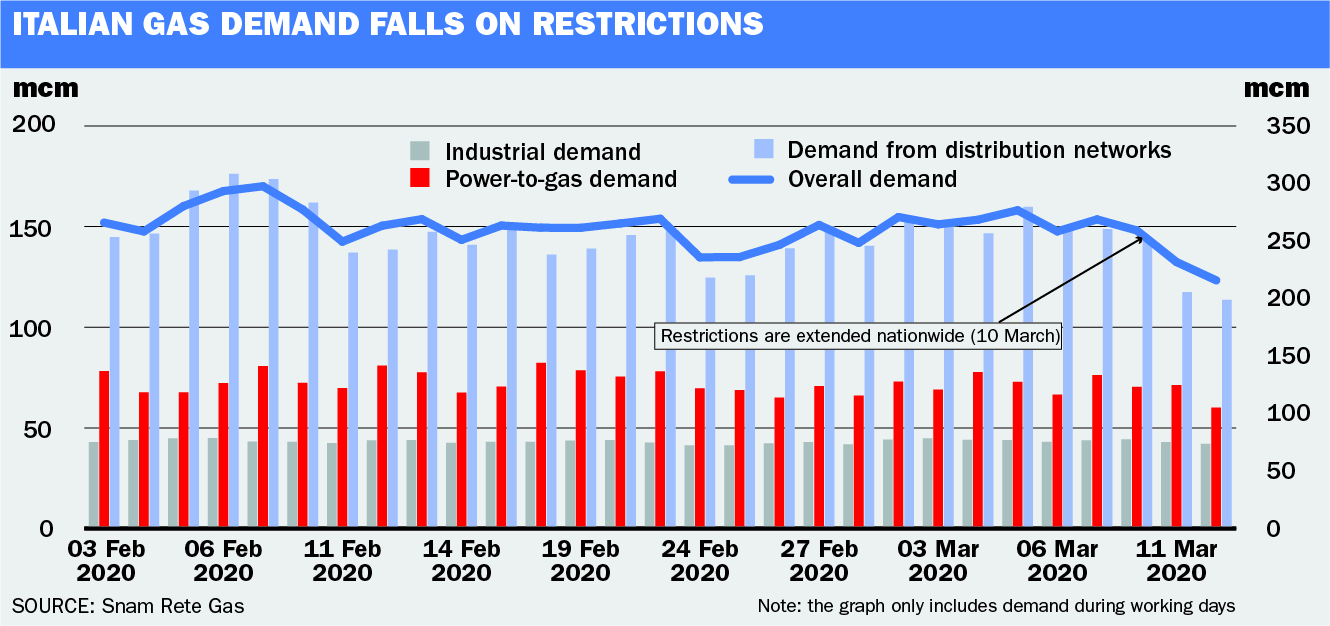
However, traders indicated it is unlikely to be business as normal with participants increasingly risk averse away from an office environment.

*13 March 2020, 15:53*

**Italian gas demand plunges on coronavirus restrictions**

The coronavirus outbreak took a toll on [Italian gas demand](https://www.icis.com/explore/resources/news/2020/03/13/10482210/italian-gas-demand-plunges-on-coronavirus-led-restrictions) in week 11 as the government extended nationwide restrictions against the spread of the virus.

If restrictions continue, demand and gas prices are likely to fall further as warmer temperatures follow spring, pressuring consumption for heating. Power prices are also expected to plunge on the back of weaker gas. Gas is Italy’s main source for power generation and the marginal fuel, therefore a price maker for Italian power.

*12 March 2020*

**ICIS ANALYST VIEW: Expect weakness in Chinese summer gas demand**

• Coronavirus [impact on LNG to worsen](https://www.icis.com/explore/resources/news/2020/03/12/10481825/icis-analyst-view-expect-weakness-in-chinese-summer-gas-demand)

• China’s big three will have sought some LNG volume deferrals as another means by which to deal with the mounting oversupply

• Incremental demand for gas and LNG this summer will be unusually low

*6 March 2020*

**Coronavirus fails to pull down Italian power demand significantly**

The Italian wholesale electricity market has so far [avoided major losses](https://www.icis.com/explore/resources/news/2020/03/06/10479584/coronavirus-fails-to-pull-down-italy-s-demand-significantly) following the outbreak of the Coronavirus in the country, the strongest so far across Europe.

*5 March 2020*

**PODCAST: Coronavirus and the LNG impact**

After the cancellation of CERAWeek in Houston due to concerns over the virus, Global LNG Editor Ed Cox and Americas Editor Ruth Liao discuss the impact on upcoming events and what’s new in the LNG market this week.

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## Coronavirus’ effect on the energy sector

By **WILLIAM GIRLING** **.** Mar 19, 2020, 5:46AM



**As offices, schools and other establishments close in an effort to contain the virus, some people are concerned about the stability of the grid.**

Yet, aside from adjusting to the new conditions of working from home, Professor Phil Hart, Director of Energy and Power at [Cranfield University](https://www.cranfield.ac.uk/), wants to assure the public that our present energy system shouldn’t meet any additional challenges.

“Our power transmission and distribution systems are extremely robust and over recent years energy efficiency measures means our overall power consumption as a country has reduced,” he said.

In fact, he claims, the disruption, far from straining the availability of energy, may actually free it up. [Mitsubishi Electric estimates](https://les.mitsubishielectric.co.uk/the-hub/energyuseinaircon) that as much as 20TWh of the UK’s electricity consumption is spent on air conditioning (10% of the total), including in offices.

Additionally, because fewer people are commuting using petrol/diesel vehicles and industry has slowed down, the virus’ effect has actually reduced CO2 levels worldwide - China alone has [reportedly](https://www.scientificamerican.com/article/how-the-coronavirus-pandemic-is-affecting-co2-emissions/) reduced emissions by 25%.

**Meeting the demand for energy**

Professor Hart believes that meeting the consumer demand for energy should be able to continue unabated - only an unlikely scenario, such as all energy workers being incapacitated simultaneously, could disrupt power stations.

“The advent and scale of renewables in our supply system is helpful here as the size of renewable plants is generally much smaller, and the national power system will be better able to handle withdrawal of multiple smaller sites,” he explained.

With regard to oil and gas supplies, Hart considers the [recent pricing war](https://markets.businessinsider.com/commodities/news/oil-price-plunge-war-saudi-arabia-russia-output-coronavirus-reaction-2020-3-1029010123), which has seen prices drop by 26%, to be indicative of an abundance of supply rather than a shortage.

**SEE ALSO:**

* [Siemens creates the UK’s first EV charging street](https://www.csomagazine.com/smart-cities/siemens-creates-uks-first-ev-charging-street)
* [Stony Brook University: managing energy with data](https://www.csomagazine.com/technology/stony-brook-university-managing-energy-data)
* [Read the latest issue of Energy Digital here](https://www.energydigital.com/magazine/energy-digital/december-2019)

This opinion is [verified by a recent article](https://www.nationalgeographic.com/environment/global-warming/end-cheap-oil/) by National Geographic, which contends that supply is so profuse that production has to be restricted in order to avoid the current US$30 for a 42-gallon (159-litre) barrel price from plummeting.

In any case, biomass and coal-fired power stations should be able to continue without foreseeable restrictions.

“I feel sure that major producers such as [DRAX](https://www.drax.com/) have contingency plans in place to ensure maintenance of their base load plant is kept up to date, so the overall risk of any issues with power supply is really quite small currently,” said Hart.

**The effect on smaller companies**

Whilst larger companies might have the resources to weather the financial storm, smaller energy providers may become concerned about their prospects. However, Hart is again sceptical that current levels of disruption would have a significant impact.

“Whilst there may be variations in daily use profile, changes in power flows through the grid, or modest reductions in power use potentially, none of these should be meaningful to the overall commercial supply and demand outcome.

“The only exception to this is if we see major users like industrial, manufacturing or chemical works shutting down, reducing the demand significantly,” he clarifies.

So far, there have been [closures of car manufacturing plants](https://www.cnbc.com/2020/03/18/general-motors-ford-and-fiat-chrysler-to-close-all-us-factories-due-to-the-coronavirus-sources-say.html) in the US and UK, but no significant slow down for other crucial industrial and manufacturing sectors (chemicals, food processing, etc). Although this situation could change, so far, there is no cause for alarm.

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### [The energy transition of Asia Pacific](https://www.energydigital.com/sustainability/energy-transition-asia-pacific)

By

**MARCUS LAWRENCE** **.**

 Apr 01, 2020, 9:25AM



**As Asia Pacific’s power demands and potential for energy production continue to grow, we discuss the region’s energy transition with Vestas’s regional President and CEO, Clive Turton**

Asia Pacific represents one of the most diverse markets on practically every level, and its energy sector is no different. With the region set to become a technological

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### [Trina Solar boosts smart energy with ‘Vertex’](https://www.energydigital.com/power-generation/trina-solar-boosts-smart-energy-vertex)

By

**WILLIAM GIRLING** **.**

 Mar 31, 2020, 5:28AM



[**Trina Solar**](http://www.trinasolar.com/)**, a leading Chinese manufacturer of integrated PV (photovoltaic) panels and smart energy solutions has**[**announced its ‘Vertex’ modules**](https://www.prnewswire.co.uk/news-releases/trina-solar-leads-the-era-of-500w-output-with-its-shipment-of-world-s-first-vertex-modules-866684683.html)**.**

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### [OX2 to develop third-largest wind farm in Finland](https://www.energydigital.com/renewable-energy/ox2-develop-third-largest-wind-farm-finland)

By

**WILLIAM GIRLING** **.**

 Mar 31, 2020, 4:40AM



**Swedish renewable energy company OX2 has**[**stated its intention**](https://www.ox2.com/press-release/ox2-is-constructing-the-third-largest-wind-farm-in-finland/)**to build the third-largest wind farm in Vaala, North Ostrobothnia, Finland.**

The 132 MW Metsälamminkangas site will be constructed following at agreement with

[Continue Reading](https://www.energydigital.com/renewable-energy/ox2-develop-third-largest-wind-farm-finland)

**Oil 2020**

Fuel report — March 2020



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* [Executive Summary](https://www.iea.org/reports/oil-2020#executive-summary)
* [Key findings](https://www.iea.org/reports/oil-2020#key-findings)
* [Press release](https://www.iea.org/news/global-oil-demand-to-decline-in-2020-as-coronavirus-weighs-heavily-on-markets)

**In this report**

Oil 2020 examines the key issues in demand, supply, refining and trade to 2025. This year, the report considers topics such as the impact of the new coronavirus (COVID-19) on demand; slowing supply growth in the United States and other non-OPEC countries; and the level of spare production capacity in OPEC countries to help meet demand growth. Oil 2020 looks at the interplay between the expanding US influence in global oil supply and the demand from Asia for exports from the Middle East.  
  
At the same time, global energy transitions are affecting the oil industry: companies must balance the investments needed to ensure sufficient supplies against the necessity of cutting emissions. In a decarbonising world, refiners face a big challenge from weaker transport fuel demand.

* [Press release](https://www.iea.org/news/global-oil-demand-to-decline-in-2020-as-coronavirus-weighs-heavily-on-markets)
* [Executive Summary](https://www.iea.org/reports/oil-2020#executive-summary)
* [Key findings](https://www.iea.org/reports/oil-2020#key-findings)

**Executive Summary**

The outbreak of the new coronavirus (COVID-19) has added a major layer of uncertainty to the oil market outlook at the start of the forecast period covered by this report. In 2020, global oil demand is expected to contract for the first time since the global recession of 2009. The situation remains very fluid, however, making it extremely difficult to assess the full impact of the virus.

To construct a base case for oil demand in 2020, this report draws on a wide range of data sources, including initial data for transport fuel demand, the most affected sector, and recently revised global GDP estimates by the Organisation for Economic Co-operation and Development (OECD). In this base case, we assume that although the virus is brought under control in China by the end of the first quarter, the number of cases rises in many other countries. Containment measures imposed in North America, Europe and elsewhere are expected to have a smaller impact on oil demand than those in China. However, demand from the aviation sector will continue to suffer from the contraction in global air travel.

In this case, oil demand in China suffers the most in the first quarter, with a year-on-year fall of 1.8 million barrels per day (mb/d). Global demand drops by 2.5 mb/d. In the second quarter, an improving situation in China offsets deteriorating demand elsewhere. A progressive recovery takes place through the second half of 2020. For 2020 as a whole, the magnitude of the drop in the first half leads to a decline in global oil demand of around 90,000 barrels a day compared with 2019.

Ultimately, the outlook for the oil market will depend on how quickly governments move to contain the coronavirus outbreak, how successful their efforts are, and what lingering impact the global health crisis has on economic activity. At the time of publication, the high uncertainty over the course of the global epidemic has led us to propose two alternatives to our base case for demand in 2020: a more pessimistic one in which global measures are less successful in containing the virus, and an optimistic case in which it is contained quickly.

These alternatives are outlined in the [March edition of the IEA’s monthly*Oil Market Report*](https://www.iea.org/reports/oil-market-report-march-2020)*,*which is released in tandem with this medium-term report*.*

**Coronavirus clouds oil outlook**

The arrival of the coronavirus is rattling a global oil market that was already facing challenges. On the demand side, growth in 2019 was significantly weaker than expected and new vehicle efficiency measures have started to weigh on transport fuels. Refining capacity additions in recent years have outstripped demand growth, bringing tough competition for an industry already challenged by tightening product specifications, most notably the new International Maritime Organisation (IMO) bunker rules introduced at the beginning of 2020.

On the supply side, geopolitics remain a wild card. Production losses from Iran, Libya and Venezuela have reached a combined 3.5 mb/d since the start of 2018. Even before the coronavirus, markets had been over-supplied, leading OPEC+ producers to cut output. Looking beyond the short term, the oil market looks comfortably supplied through 2025.

Following a contraction in 2020 and an expected sharp rebound in 2021, global oil demand growth is set to weaken as consumption of transport fuels increases more slowly. Between 2019 and 2025, global oil demand is forecast to grow at an average annual rate of just below 1 mb/d.  Petrochemicals become an ever more important driver, with naphtha, liquefied petroleum gas (LPG) and ethane responsible for half of all growth. Efforts to improve the sustainability of the plastics industry will run up against the steady increase in demand from consumers in developing countries. Bans imposed on single-use plastics and recycling, even if fully implemented, will displace only a very modest amount of oil demand. Through 2025, global oil demand rises by a total of 5.7 mb/d, with China and India accounting for about half of growth.

At the same time, the world’s oil production capacity is expected to rise by 5.9 mb/d. Non-OPEC supply will rise by 4.5 mb/d while OPEC builds another 1.4 mb/d of crude and natural gas liquids capacity. This assumes that there is no change to sanctions on Iran or Venezuela. The United States leads the way as the largest source of new supply. Given its huge resource potential, it could produce even more if prices end up higher than assumed in this report. Brazil, Guyana, Iraq and the United Arab Emirates also deliver impressive gains.

Strong growth in Asian oil demand is creating major opportunities for oil producing countries that can boost exports. But growth in non-OPEC production is set to lose momentum after a few years, indicating a greater role for OPEC+ countries. The pace of expansion in the United States is slowing as independent producers cut spending and scale back drilling activity in response to pressure from investors. The deceleration in US and other non-OPEC growth from 2022 will allow OPEC producers from the Middle East to turn up the taps to help keep the oil market in balance, thereby increasing their importance for oil consuming countries.

**Markets face major challenges**

Global attention is increasingly focused on the need to accelerate clean energy transitions in order to mitigate the risks of climate change. With its major emissions footprint, the energy sector – including the oil and gas industry – is at the heart of the matter. Demand growth for gasoline and diesel between 2019 and 2025 is set to weaken as countries around the world implement policies to improve efficiency and cut carbon dioxide (CO2) emissions, and as electric vehicles increase in popularity. Refiners, nevertheless, continue to build much more capacity than what is needed to meet product demand.

The impact of clean energy transitions on oil supply remains unclear, with many companies prioritising short-cycle projects for the coming years. To date, announcements by major oil companies on reducing their CO2 emissions have tended to focus on long‑term objectives. Nevertheless, investors continue to ratchet up pressure on the industry to sharpen its focus on sustainability issues while activists, especially in Europe and North America, seek to hinder new oil developments.

With uncertainties over demand, supply, investment strategies and business models, the global oil industry faces major challenges. While ensuring it is able to continue to meet growing demand, it must also address the need to curb emissions and improve sustainability.

**Oil and clean energy transitions**

**Key findings**

Global oil demand will grow by 5.7 mb/d over the 2019-25 period at an average annual rate of 950 kb/d. This is a sharp reduction on the 1.5 mb/d annual pace seen in the past 10-year period. Following a difficult start in 2020 (-90 kb/d) due to the coronavirus, growth rebounds to 2.1 mb/d in 2021 and decelerates to 800 kb/d by 2025 as transport fuels demand growth stagnates.

Oil demand growth slows because demand for diesel and gasoline nears a plateau as new efficiency standards are applied to internal combustion engine vehicles and electric vehicles hit the market. Petrochemical feedstocks LPG/ethane and naphtha will drive around half of all oil products demand growth, helped by continued rising plastics demand and cheap natural gas liquids in North America.

**Global annual oil demand growth falls well below 1 mb/d**

Global oil demand growth, 2011-2025

[**Open**](https://www.iea.org/data-and-statistics/charts/global-oil-demand-growth-2011-2025)

mb/d

201120122013201420152016201720182019202020212022202320242025-0.500.511.522.5

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* Historical
* Forecast
* Trend

Gasoline demand sees a sharp slowdown over our forecast period with growth reduced from the 2.5 mb/d seen in the previous six year period to just 500 kb/d over the 2019-25 period. Improved efficiency standards and increased penetration of electric vehicles sees demand growth stall.

**Gasoline demand slows to a trickle**

Gasoline demand growth, 2001-2025

[**Open**](https://www.iea.org/data-and-statistics/charts/gasoline-demand-growth-2001-2025)

mb/d

2001-072007-132013-192019-2500.511.522.53

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Following a record increase of more than 2.2 mb/d in 2018, the pace of the US expansion slowed to 1.6 mb/d last year as independent producers cut spending and scaled back drilling activity. Further spending cuts are expected for 2020, with capital discipline remaining a priority.

In our base case, that assumes $60/bbl Brent, growth is expected to grind to a halt in the early 2020s and production will plateau around 20 mb/d – 2.5 mb/d higher than in 2019.

Due to its fast ramp-up and rapid decline, US light tight oil (LTO) production is more responsive to a change in the oil price than conventional sources of supply. Recent price volatility could have a major impact on US production. A price of $40/bbl would cause LTO output to decline from 2021, and fall by 1.1 mb/d to 2025, compared with growth of 2.2 mb/d in our base case.

**US oil supply set to plateau with a risk of decline with lower prices**

US total oil supply, 2010-2025

[**Open**](https://www.iea.org/data-and-statistics/charts/us-total-oil-supply-2010-2025)

mb/d

20052006200720082009201020112012201320142015201620172018201920202021202220232024202502468101214161820

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* Alaska
* LTO
* Gulf of Mexico
* Other Crude
* NGLs
* Other Liquids

Global oil supply looks comfortable through the forecast period. The world’s oil production capacity is expected to rise by 5.9 mb/d by 2025, which more than covers growth in demand.

The US leads the way as the largest source of new supply. Brazil, Guyana, Iraq and the UAE also deliver impressive gains. Colombia, the UK, Russia, Egypt, Nigeria and Angola post the biggest declines. Total non-OPEC oil supply rises by 4.5 mb/d to reach 69.5 mb/d by 2025. As for OPEC, even though sanctions and economic distress have wiped out 2.5 mb/d of production from Iran and Venezuela since 2017, effective crude oil capacity rises by 1.2 mb/d to 34.1 mb/d.

Gains in supply are heavily front-loaded, however, and robust non-OPEC growth through 2021 suggests that there is likely to be a role for OPEC+ market management during the first part of the period. From 2022, the US loses steam allowing OPEC producers from the Middle East to turn up the taps to help keep the oil market in balance.

**Global oil supply capacity keeps up with demand through 2025**

World oil demand growth vs supply capacity additions, 2019-2025

[**Open**](https://www.iea.org/data-and-statistics/charts/world-oil-demand-growth-vs-supply-capacity-additions-2019-2025)

mb/d

World oil demand growthSupply capacity additions-101234567

Demand

US

Brazil

Guyana

Iraq

UAE

Canada

Other (net)

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In 2019 the US Gulf Coast became the largest seaborne crude oil export hub outside the Middle East, supplying 2.6 mb/d to world markets. It overtook Black Sea ports sending out Russian and Caspian crude, and Nigeria. During the medium-term, the US Gulf Coast will solidify its position as the largest seaborne export hub outside the Middle East, adding another 2 mb/d to seaborne crude oil exports. Other non-OPEC producers, Brazil, Guyana, Canada, increase exports too. As US growth plateaus, Middle East producers step up to supply the required incremental barrels.

**Middle East remains important supplier to global markets**

Changes in crude oil exports, 2019-2025

[**Open**](https://www.iea.org/data-and-statistics/charts/changes-in-crude-oil-exports-2019-2025)

mb/d

OtherCanadaUSGuyanaBrazilNorwayUAEIraqSaudi ArabiaNorth AmericaLatin AmericaAfricaMiddle EastEurope-2-1.5-1-0.500.511.522.53

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* Other
* Canada
* US
* Guyana
* Brazil
* Norway
* UAE
* Iraq
* Saudi Arabia

Current oversupply and the impact of COVID-19 on demand should not be a reason for complacency when it comes to security of supply.

Global oil demand rebounds in 2021 and Asia accounts for 77% of oil demand growth through 2025. At the same time, oil production in the region declines. As a consequence, Asian oil import requirements in 2025 surpass 31 mb/d. All major Asian economies are heavily dependent on oil imports.

Oil imports will be coming from places further away, increasing voyage duration and inherently limiting flexibility when dealing with emergencies. Asian countries will need to work individually and collectively to enhance oil supply security.

**Asia’s dependence on oil imports to reach 81% in 2025**

Net oil imports share of demand in Asia in 2025

[**Open**](https://www.iea.org/data-and-statistics/charts/net-oil-imports-share-of-demand-in-asia-in-2025)

mb/d%025005000750010 00012 50015 00017 50020 00022 50025 00027 50030 000020406080100

* China
* Southeast Asia
* India
* Japan
* Korea
* Other Asia

Top of Form

**The E**

Bottom of Form

Daily Prices

Daily wholesale and retail prices for various energy products are shown below, including spot prices and select futures prices at national or regional levels. Prices are updated each weekday (excluding federal holidays), typically between 7:30 and 8:30 a.m. This page is meant to provide a snapshot of selected daily prices only. Prices are republished by EIA with permission as follows: Wholesale Spot Petroleum Prices from Refinitiv, Retail Petroleum Prices from AAA Fuel Gauge Report, Prompt-Month Energy Futures from CME Group, and Select Spot Prices from SNL Energy.

|  |  |  |  |
| --- | --- | --- | --- |
| **Wholesale Spot Petroleum Prices, 3/31/20 Close** | | | |
| **Product** | **Area** | **Price** | **Percent Change\*** |
| Crude Oil ($/barrel) | WTI | 20.51 | +45.5 |
| Brent | 14.85 | -22.1 |
| Louisiana Light | 14.51 | +148.0 |
|  |  |  |  |
| Gasoline (RBOB) ($/gallon) | NY Harbor | 0.44 | -1.6 |
| Gulf Coast | 0.47 | -5.0 |
| Los Angeles | 0.35 | -14.1 |
|  |  |  |  |
| Heating Oil ($/gallon) | NY Harbor | 0.97 | -2.3 |
| Gulf Coast | 0.76 | -3.6 |
| [3:2:1 Crack Spread](https://www.eia.gov/todayinenergy/includes/CrackSpread_Explain.cfm) ($/barrel) | Gulf Coast (LLS) | 11.75 | -45.5 |
|  |  |
|  |  |  |
| Low-Sulfur Diesel ($/gallon) | NY Harbor | 1.02 | -2.2 |
| Gulf Coast | 0.93 | -3.4 |
| Los Angeles | 1.05 | +2.1 |
|  |  |  |  |
| Propane ($/gallon) | Mont Belvieu, TX | 0.29 | +17.2 |
|  | | | |
| **Retail Petroleum Prices (**[**AAA**](http://www.fuelgaugereport.com/)**), 3/31/20 ($/gallon)** | | | |
| Regular Gasoline | U.S. Average | NA | NA |
| Diesel | U.S. Average | NA | NA |
|  |  |  |  |
| **Prompt-Month Energy Futures, 3/31/20 Settlement** | | | |  |
| **Product** | **Price** | **Percent Change\*** | **Volume** | **Prior Day Open Interest** |
| Crude Oil ($/barrel) - Nymex May | 20.48 | +1.9 | 698 | 610 |
| Gasoline-RBOB ($/gallon) - Nymex | NA | NA | NA | NA |
| Heating Oil ($/gallon) - Nymex Apr | 1.01 | -0.7 | 3 | 3 |
| Natural Gas ($/million Btu) - Nymex May | 1.64 | -3.0 | 153 | 348 |
| Coal ($/ton) - Nymex | NA | NA | NA | NA |
| Ethanol ($/gallon) - CBOT | NA | NA | NA | NA |

[Notes for Prompt-Month Energy Futures](https://www.eia.gov/todayinenergy/includes/EnergyFutures_Explain.cfm)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Select Spot Prices for Delivery Today** | | | | | |
| [**Region**](https://www.eia.gov/todayinenergy/includes/Region_Explain.cfm) | **Natural Gas** ($/million Btu) | | **Electricity** ($/MWh) | | [**Spark Spread**](https://www.eia.gov/todayinenergy/includes/sparkspread_explain.cfm)($/MWh) |
| **Price** | **Percent Change\*** | **Price** | **Percent Change\*** |
| New England | 1.65 | +10.0 | 20.22 | +5.1 | 8.67 |
| New York City | 1.59 | +11.0 | 17.47 | +1.4 | 6.31 |
| Mid-Atlantic | 1.51 | +9.5 | 21.17 | -11.9 | 10.58 |
| Midwest | 1.57 | +8.0 | 22.91 | +11.8 | 11.92 |
| Louisiana | 1.71 | +3.6 | 15.75 | -14.9 | 3.78 |
| Houston | 1.68 | +5.5 | 17.50 | -58.1 | 5.76 |
| Southwest | 0.98 | -6.6 | 11.75 | -26.6 | 4.88 |
| Southern CA | 1.43 | +14.6 | 12.51 | -27.0 | 2.51 |
| Northern CA | 2.23 | +4.1 | 21.79 | -2.8 | 6.19 |
| Northwest | 1.53 | +12.6 | 19.00 | +11.8 | 8.30 |

#

* Satellite images show how electric lights have dimmed in Chinese cities as a result of the coronavirus outbreak.
* This serves as a proxy for decreasing demand for power.
* The same methodology can also be used to track the recovery of demand once the disruptions begin to abate.

The novel coronavirus (SARS-CoV-2) and the disease it causes (COVID-19) have caused significant disruptions to markets around the world since the virus was first identified in Wuhan City in China in late 2019.

In the energy sector, the impact has been most apparent in the dramatic fall in oil demand in China. It has also impacted the global price of oil. The International Energy Agency predicts the overall [demand will lower by about 350,000 barrels per day over 2020](https://www.atlanticcouncil.org/blogs/new-atlanticist/coronavirus-and-the-oil-market-the-effects-thus-far-and-what-to-expect-next/). Likewise, the US Energy Information Administration [has revised downwards its projections for oil](https://www.eia.gov/todayinenergy/detail.php?id=42855) and products like gasoline.

Recently, some analysis of the impacts on electricity demand, especially in Italy — one of the hardest hit countries in the world — have emerged. Italian power demand [dropped by up to 18% as of mid-March](https://www.wsj.com/articles/plunge-in-italys-electricity-use-hints-at-coronavirus-risks-facing-u-s-11584532801). Power demand gives a reasonable indicator of economic activity, as it is used in all sectors from households to businesses and industry.

Satellite data has been used to look at [emissions from the transport sector](https://www.nytimes.com/interactive/2020/03/22/climate/coronavirus-usa-traffic.html), and has found large reductions in major US cities. We used a NASA/NOAA satellite instrument to take a look at the decrease in electricity in some key Chinese cities.

**Have you read?**

* [Track the spread of coronavirus around the world](https://www.weforum.org/agenda/2020/03/coronavirus-tracking-around-the-world)
* [The economic effects of COVID-19 around the world](https://www.weforum.org/agenda/2020/02/coronavirus-economic-effects-global-economy-trade-travel)
* [This is what different countries are doing to stop coronavirus from spreading](https://www.weforum.org/agenda/2020/02/coronavirus-spread-virus-disease-countries-epidemic)

**Lights at night**

Electric power disruptions can occur anywhere in the world. Many of these are associated with natural disasters such as typhoons, wind storms, tornadoes and earthquakes. War can be another cause of power outages. In addition, there are outages associated with the breakdown of electric grids. These can arise from fuel shortages, ageing power plants or faulty delivery systems. The frequency of such outages likely increases when growth in consumption outpaces the power generation and delivery systems. In some cases, power companies rotate power outages as an equitable means of distributing a scarce commodity. A rarer occurrence is a slowdown in economic activity — in this case due to a pandemic.

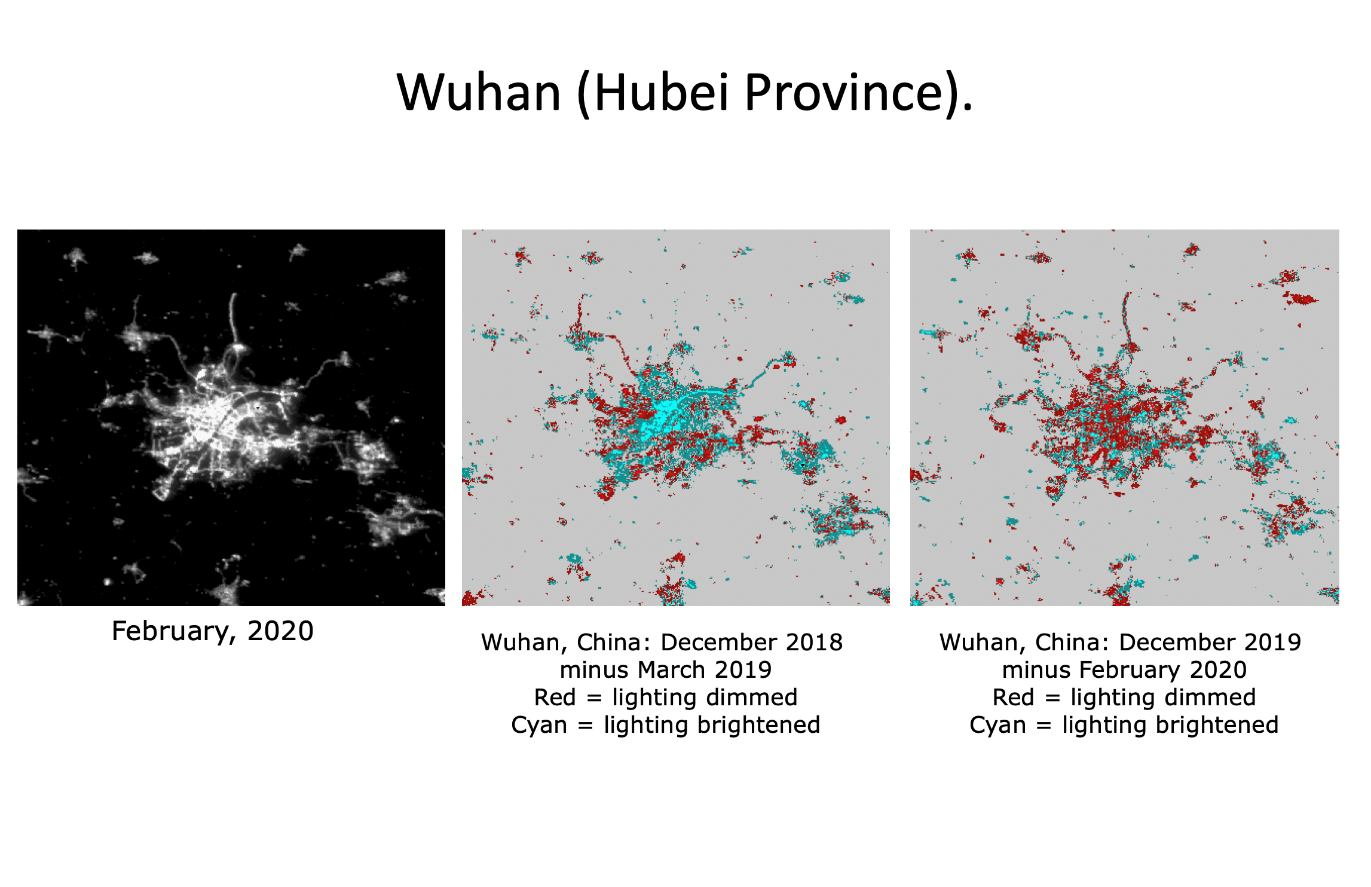
The vast majority of studies conducted with satellite-observed night-time lights are based on monthly or annual cloud-free composites produced by the Earth Observation Group (EOG) at the Payne Institute at the Colorado School of Mines. These are favoured by researchers for a number of reasons: the files are available in a generic format; the input data have been screened to exclude solar, lunar and stray light contamination; and the annual night-time lights are filtered to remove detections from biomass burning, aurorae, and other background noise.

We briefly explore electric power demand using night-time lights recorded by the [Visible Infrared Imaging Radiometer Suite](http://dx.doi.org/10.1080/01431161.2017.1342050) (VIIRS) — a billion-dollar instrument onboard the [Suomi satellites.](https://www.atlanticcouncil.org/blogs/new-atlanticist/coronavirus-and-the-oil-market-the-effects-thus-far-and-what-to-expect-next/) This instrument's extremely low detection limits make it possible to detect and characterize lighting from bright urban areas to dimly lit rural settlements. The VIIRS' primary mission is weather. The sensor is flown on polar-orbiting satellites and, with a 3000 km swathe, is capable of collecting a complete set of day and night images every 24 hours.

**COVID-19's impacts on lighting**

By 'subtracting' one month from another it is possible to identify areas where lighting has either dimmed or brightened. To control for annual cycling in lighting brightness levels, we compared image difference pairs from before and after the Chinese new year months in 2019 (February) and 2020 (January). Specifically, December 2018 minus March 2019 was compared with December 2019 minus February 2020.

Wuhan (Hubei Province), Changsha (Hunan Province), and Xi’an (Shaanxi Province) all show profound differences in lighting demand between the beginning of 2019 and the beginning of 2020. The red colour shows lighting was dimmed (a proxy for lower power demand), while the cyan shows the opposite. In the three Chinese cities explored (Figures 1-3 below), the red dominates the images.



BP details COVID-19 response and provides market update

Release date: 1 April 2020

* Protecting the physical and mental health of our people
* Supporting the communities where we live and work
* Strengthening our finances to better weather market volatility

[Press releasePDF / 130.5 KB](https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/news-and-insights/press-releases/bp-details-covid-19-response-and-provides-market-update.pdf)

BP today set out actions it is taking in response to the COVID-19 pandemic and ongoing market disruption. It also provided an update on factors expected to affect its first quarter results.

Chief executive Bernard Looney said:

“The world is in a fight against COVID-19 and I want to thank all the people looking after us. The nurses and doctors, the first responders and the police. The people keeping food shops open and deliveries happening. And also the people we don’t see so much, like those behind the technologies that mean we can stay connected with our loved ones and with our work colleagues. Many, many are giving their time and risking their own well-being so that we can stay safe and sound. We rely on them, we are indebted to them, and I want to pay tribute to the sacrifices they are making on our behalf.

At BP we are mobilising in our own way across the BP world, taking action with three clear objectives: protecting our people; supporting the communities where we live and work; and strengthening our finances.

Protecting our people

I want to recognize the courage and commitment of thousands of our people out in the field – in retail, offshore, at our plants and elsewhere. I also applaud the adaptability of everyone working from home as they support our operations. Together, we continue to help supply the energy the world needs.

We are doing our best to keep everyone healthy:

* Our operations: Changing shift patterns to make social distancing easier; restricting workplace access; increasing testing; and enabling safe isolation and evacuation of any suspected cases.
* Our retail sites: Boosting precautions to protect both staff and customers with increased cleaning; providing personal protective equipment for staff; installing screens; and implementing social distancing in our stores.
* Our projects: Reducing non-essential activity and manning levels where possible to reduce the risk of the virus spreading. With a large population in a remote, closely confined worksite, we have decided to remove thousands of construction staff from the Tangguh expansion project in Indonesia.
* Our team: Offering psychological support in many ways, recognizing this is a mental health challenge as well as a physical health threat.

Job security is a big worry at this time, so we have taken the decision that for the next three months no BP employees will be laid off as a result of virus-related cost cutting. We simply do not want to add another burden during what is already an incredibly stressful time for individuals and families.

Supporting our communities

Society rightly has high expectations of companies like BP. Given our reach, resources and skills, we have a special responsibility, especially during times like these. I have been admiring how so many businesses around the world are stepping up in a big way.

That is what we are trying to do at BP. We are contributing at a corporate level to help fight the pandemic, and we are also trying to give thousands of BP volunteers the latitude, support and resources to join the fight in the communities where they live and work.

* We have donated $2 million to the COVID-19 Solidarity Response Fund to support the work of the World Health Organization leading and coordinating the international pandemic response.
* In the UK, emergency service vehicles can refuel for free at our retail stations and we are supplying free fuel to air ambulances. We are supporting similar efforts in Spain, Turkey, Poland, and Australia. And in Germany we have provided fuel cards to health care workers.
* We are using our own stocks and supply chain to donate personal protective equipment to health services in the United States, UK, France, Belgium, Spain, The Netherlands and Germany.
* In Brazil, our biofuels joint venture is diverting some of its sugarcane ethanol production to make a disinfectant product and supplying it to local health services that serve a population of 1.4 million.
* Food from cafeterias we have closed in the UK is being donated to foodbanks and charities.
* After coronavirus border restrictions cut off supplies of clean water to a town in Mauritania, our local team repaired an old water tank to provide a temporary supply for the community and is working with authorities and NGOs to develop a permanent solution.
* And around the world, people are putting BP’s new purpose into action. Colleagues are running online home-schooling sessions, co-ordinating food deliveries to those in need, and even stitching masks and 3D-printing goggles for local hospitals.

We know there is more we can do -- and that we won’t get everything right -- but we are challenging ourselves to try to find more ways to have a positive impact.

Strengthening our finances

At the same time, we are in action to protect the financial health of BP. This may be the most brutal environment for oil and gas businesses in decades, but I am confident that we will come through it – we know what to do and we have done so before. And we also entered this environment in great shape with good operating momentum and financial discipline, strong liquidity and extensive optionality in our portfolio. We remain committed to growing sustainable free cash flow and distributions to our shareholders over the long term.

We are now acting quickly and decisively to further strengthen our financial frame in response to the currently volatile and extremely challenging market conditions. We will continue to review these actions, and any further actions that may be appropriate, in response to changes in prevailing market conditions.

* Divestment programme: BP’s existing divestment programme to deliver $15 billion of announced transactions by mid-2021 remains on track. The phasing of receipt of $10 billion of divestment proceeds by the end of 2020 may be revised as transactions complete, particularly while volatile market conditions persist. This includes the sale of our Alaskan business to Hilcorp which we continue to expect will complete during 2020, subject to regulatory approvals. We will provide further information on this transaction going forward, as appropriate.  
    
  To date, $9.6 billion of transactions have been announced since the start of 2019, with around $3.4 billion of cash proceeds received. This divestment programme is underpinned by a wide range of options, including assets in less commodity-sensitive businesses where demand remains strong.
* Capital expenditure: We now expect 2020 organic capital spend to be around $12 billion, around 25% below our prior full-year guidance. In Upstream, this includes a reduction of around $1.0 billion in spend on short-cycle onshore activity, including in BPX Energy, as well as deferral of certain exploration and appraisal activity and optimisation of our major project spend. In Downstream, we expect a reduction in spend of around $1.0 billion, which includes reduced spending across our fuels marketing, refining and petrochemicals businesses.  
    
  The expected impact of these capex interventions on 2020 underlying Upstream production includes a current reduction of around 70 thousand barrels equivalent per day (mboed) attributable to BPX Energy. Looking ahead, full year 2020 underlying Upstream production is expected to be lower than in 2019.
* Cost savings: We expect to achieve around $2.5 billion of cash cost savings by the end of 2021, compared with 2019, with digitisation and increased integration across the group as key drivers of this next phase of cost efficiencies. Some of these cost savings may have associated restructuring charges, which will be reflected as appropriate in our financial disclosures.
* Liquidity: BP has around $32 billion of cash and undrawn facilities available at the end of the first quarter 2020. Last week S&P reaffirmed BP’s A- credit rating while revising its outlook from positive to stable. And today Moody’s reaffirmed BP’s A1 credit rating and revised its outlook from stable to negative.

First quarter update

BP’s first quarter 2020 results are scheduled to be reported on Tuesday 28 April. Notwithstanding the interventions outlined above, the challenging environment is expected to have an impact on our first quarter results and there is uncertainty around how long current depressed commodity pricing and weakness in product demand will continue.

* BP continues to monitor the impact of COVID-19 on our global operations and in the first quarter there was no significant operational impact. This could change through the second quarter;
* BP’s first-quarter reported Upstream production is expected to be lower than fourth-quarter 2019, in a range of 2,550-2,600 mboed;
* BP’s first-quarter Downstream refining availability is expected to be in a range of 95-96%, with some reduction seen in utilisation towards quarter-end due to reducing fuel demand;
* We expect Downstream first quarter results to be impacted by a significant and growing decline in demand for fuels, jet fuel and lubricants as countries implemented significant measures to address COVID-19. This has been particularly evident in China and, towards quarter-end, has extended into our larger US and European markets;
* The impact of the stronger US dollar on deferred tax balances is expected to significantly increase BP’s underlying effective tax rate in the first quarter relative to our full year guidance;
* BP routinely manages its working capital balances across the business with an aim to minimise cash volatility, and as a result we do not expect a benefit to cash flow from the change in first quarter quarter-end pricing;
* BP continues to review potential first quarter impairment charges and currently expects to take a non-cash, non-operating charge of around $1 billion in the quarter;
* BP’s marker prices and marker margins for first quarter 2020 can be found in the Investors section of www.bp.com;
* We will provide further details on these and other matters in our first quarter results.

I have been incredibly inspired by the response of colleagues globally to the coronavirus situation. They are taking care of each other, supporting their communities, and identifying new ways to safely drive down costs and strengthen our finances. I truly believe that our purpose is driving our actions during this crisis. That is why I am confident we will weather this storm and emerge better able to deliver our ambition – to make BP a net zero company by 2050 or sooner and help the world achieve the same goal.

I am just as confident that the world will emerge stronger as well. As hard as that may seem today, we will get through this and learn important lessons in the process. We are seeing the best of people. We are coming together as a global community. We can come out of this crisis closer, more collaborative, and more caring, with all the benefits that brings for society and the planet.”

Further information

Contacts

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Cautionary statement

In order to utilize the ‘safe harbor’ provisions of the United States Private Securities Litigation Reform Act of 1995 (the ‘PSLRA’), BP is providing the following cautionary statement.  This press release contains certain forward-looking statements – that is, statements related to future, not past events and circumstances – which may relate to one or more of the financial conditions, results of operations and businesses of BP and certain of the plans and objectives of BP with respect to these items. These statements are generally, but not always, identified by the use of words such as ‘will’, ‘expects’, ‘is expected to’, ‘aims’, ‘should’, ‘may’, ‘objective’, ‘is likely to’, ‘intends’, ‘believes’, ‘anticipates’, ‘plans’, ‘we see’ or similar expressions.  In particular, among other statements, statements relating to the coronavirus pandemic (COVID19) including its risks, impacts, consequences and challenges and how BP is prepared for and responding to this; plans and expectations relating to BP’s ambition; plans and expectations relating to the financial frame and the investor proposition,  focus on safety, the operational impact of COVID19, commitment regarding employee job security, the divestment programme including expectations with respect to completion of transactions and the timing of receipt of  proceeds of agreed disposals (including the announced sale of our Alaskan business to Hilcorp), reductions in organic capital expenditure and reductions in production due to capex interventions cash cost savings and associated restructuring charges, full year 2020 production guidance and expected range, expectations for demand for our products, downstream refining availability and expected impact on first quarter results due to decline in demand, the effective tax rate relative to guidance, working capital balances and assessment of impairment charges, are all forward looking in nature.  By their nature, forward-looking statements involve risk and uncertainty because they relate to events and depend on circumstances that will or may occur in the future and are outside the control of BP. Actual results may differ from those expressed in such statements, depending on a variety of factors including the negative impact of the COVID19 coupled with actions by OPEC+ including the significant drop in the oil price, overall global economic and business conditions impacting our business and demand for our products, as well as  the risk factors set forth in our most recent Annual Report and Form 20-F under “Risk factors” and in any of our more recent public reports. Our most recent Annual Report and Form 20-F and other period filings are available on our website at www.bp.com  or can be obtained from the SEC by calling 1-800-SEC-0330 or on its website at [www.sec.gov](http://www.sec.gov)

COVID-19 BP response

Last edited: 1 April 2020

As the impact of coronavirus – or COVID19 – touches every corner of the globe, we are working across BP in response to these unprecedented circumstances that our people and communities now face

Our executive support team and other leadership teams are meeting daily to address and respond to the ever-changing conditions in the countries where we operate.

BP is focused on supporting governments’ calls to limit the spread of COVID-19, while ensuring the supplies of energy, fuel and vital petrochemical feedstocks are uninterrupted.

Quick links

Our people

Our first priority will always remain the safety and health of our people. With this in mind, all employees who can are now working from home for the foreseeable future.

Our people involved in, or supporting, critical operations continue at their normal workplace and we have processes in place to help protect them. That includes operating robust protocols for health and pre-mobilization checks, travel and workplace access, social distancing and isolation.

Addressing those who work on the frontline of BP’s operations and at retail sites around the world, chief executive Bernard Looney says: “Thank you for keeping our operations running safely. It matters to so many people. You are helping to keep the world moving forwards though these most challenging of times.”

Our customers

The safety of customers is equally our priority. We want our retail sites to be clean, [safe places for people to shop, as well as work](https://www.bp.com/en/global/corporate/news-and-insights/covid-19-bp-response/keeping-safe-at-our-retail-sites.html).

We’re following the advice of relevant national health authorities in every country where we operate. We’re increasing our cleaning procedures, encouraging our customers to practise ‘social distancing’ in our shops and forecourts, while also taking precautionary measures such as removing the sale of open food products.

Our operations

At every operating site – be it an offshore platform or a petrochemical facility – we have robust business continuity plans in place to make sure we can continue to provide the energy and fuels that the world needs.

At major operational sites, such as our refineries, we have implemented a new ‘team-based’ shift model, where contact between two teams is restricted.

We are currently not experiencing any serious disruption to our operations due to coronavirus and our commitment to our customers and suppliers remains the same.

Our support for communities

All of us are impacted by the global spread of COVID-19 in some way. BP stands ready to help the communities where our people live and our businesses operate. We’re offering support to governments and partners to see where we can do more.

* The BP Foundation [will donate $2 million USD to the WHO’s COVID-19 Solidarity Response Fund](https://www.bp.com/en/global/corporate/news-and-insights/covid-19-bp-response/inthistogether-our-response-to-covid-19.html#donation-to-who), which supports medical professionals and patients worldwide by providing critical aid and supplies. The Solidarity Response Fund also helps track and understand the spread of the COVID-19 virus and supports efforts to develop tests, treatments, and ultimately, a vaccine.
* In the UK, [we’re providing free fuel](https://www.bp.com/en/global/corporate/news-and-insights/covid-19-bp-response/inthistogether-our-response-to-covid-19.html#free-fuel-for-emergency-services) to emergency services vehicles during the current crisis. The offer includes charging of electric vehicles through BP Chargemaster.
* BP is offering [free delivery of food and convenience goods](https://www.bp.com/en/global/corporate/news-and-insights/covid-19-bp-response/inthistogether-our-response-to-covid-19.html#free-delivery) from some of its UK retail sites.
* BP Chargemaster is [providing support to electric taxi drivers](https://www.bp.com/en/global/corporate/news-and-insights/covid-19-bp-response/inthistogether-our-response-to-covid-19.html#help-for-nhs-heroes) on the FREE NOW and Gett ride-hailing apps who are transporting NHS workers during the current crisis.
* In Spain, we’re supplying free fuel to emergency services vehicles through Routex fuel cards, while customers can use their Mi BP loyalty cards [to donate points to the Red Cross (Cruz Roja)](https://www.bp.com/en/global/corporate/news-and-insights/covid-19-bp-response/inthistogether-our-response-to-covid-19.html#supporting-health-services) with BP trebling their value to the charity.
* Our Aral retail network in Germany has given away [10,000 fuel cards to health workers](https://www.bp.com/en/global/corporate/news-and-insights/covid-19-bp-response/inthistogether-our-response-to-covid-19.html#supporting-health-services), while in Poland key hospitals have received BP Supercards to fund fuel for their medical transport.
* BP Turkey is [supporting Istanbul’s state ambulance service](https://www.bp.com/en/global/corporate/news-and-insights/covid-19-bp-response/inthistogether-our-response-to-covid-19.html#fuel-donation-for-istanbul-ambulances) throughout April by donating free fuel.
* Air BP is [providing free jet fuel](https://www.bp.com/en/global/corporate/news-and-insights/covid-19-bp-response/inthistogether-our-response-to-covid-19.html#fuel-donation-for-air-ambulance-charities) for use by the helicopters of a number of UK air ambulance services, supporting their life-saving work during the coronavirus pandemic.

We’ll update this thread as we have more to share.

Our industry today

While we all grapple with the impact of COVID-19, BP and the wider energy industry is also managing the impacts of steep falls in commodity prices and stock markets at the same moment. Such volatility is not new; BP is well-practised in taking action to weather the challenges of the external environment.

In a [LinkedIn post](https://www.linkedin.com/pulse/our-response-coronavirus-bernard-looney/), CEO Bernard Looney writes: “..To protect the health of our company we are making interventions to reduce capital and operational spending. BP is strong and, importantly, we have navigated challenges like this before. We know what to do.”

Saudi Arabia pumps 12m barrels of oil for the first time



The Kingdom’s previous record output was about 11 million barrels, achieved only briefly. (Reuters)

**Short Url**

https://arab.news/jdwxf

Updated 12 sec ago

FRANK KANE

April 02, 202001:34

* Daily record smashed amid market turmoil
* Previous record output was about 11 million barrels

DUBAI: Saudi Arabia pumped more than 12 million barrels of oil on Wednesday for the first time in its history.

The Kingdom has vowed to ramp up production as an oil “price war” shakes the global energy industry following the end of a supply agreement with other producers.

Officials at Saudi Aramco, the world’s biggest oil company, and the Saudi Ministry of Energy, Industry and Mineral Resources told Arab News that crude output on the first day of April — when the OPEC+ agreement to limit supply lapsed — was more than 12 million barrels. Some reports put it at 12.3 million.

The Kingdom’s previous record output was about 11 million barrels, achieved only briefly.

**SPOTLIGHT:**[**From Middle East to USA, coronavirus impact transforms oil industry’s dynamics**](https://www.arabnews.com/node/1651366/business-economy)

Aramco had pledged to increase its maximum sustainable capacity (MSC) — the level at which it can safely maintain long-term output — to 12.3 million in the coming months; that it has already hit this level is regarded as a measure of its operational efficiency and the Kingdom’s determination to win the battle for market share.

The company released a short video showing laden oil tankers sailing away from Saudi ports. It said it had loaded 18.8 million barrels onto 15 tankers, which would have taken about three days.

[](https://twitter.com/Aramco)

**[Aramco](https://twitter.com/Aramco)**

[✔@Aramco](https://twitter.com/Aramco)

Reliability goes beyond performance indicators. It is a culture that ensures a sustainable delivery of energy to the world. We are proud to have loaded 15 oil tankers with 18.8 million barrels.  
  
This is [#RealEnergy](https://twitter.com/hashtag/RealEnergy?src=hash)  
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Aramco’s strategy of large output increases and significant discounts to customers — labeled a “shock and awe” play by energy experts — has transformed the oil industry. The price of crude oil plunged as demand for energy was hit by the coronavirus pandemic. Some producers, especially in the US where extraction costs are high, are facing financial disaster.

“If Saudi Arabia sustains this, it would be an unprecedented demonstration of their MSC,” said Robin Mills, chief executive of the Qamar energy consultancy. “Assuming that it is production, and not just drawing down on storage, it’s an impressively quick ramp-up.”

OPINION

[Faisal Faeq](https://www.arabnews.com/taxonomy/term/280221)

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It was also notable that production was unaffected by any lingering issues from terrorist attacks last September on Aramco facilities at Abqaiq and Khurais, Mills said.

Despite the flood of oil onto global markets, the Brent crude global benchmark price rose by about 10 per cent toward $25 per barrel after US President Donald Trump said he thought the price was too low, and offered talks with Saudi Arabia and Russia about the global oil glut.

Shares in Saudi Aramco rose for a third consecutive day, up 1.5 per cent to SR30.6.

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Quarantined offshore: North Sea energy groups rocked by coronavirus

Companies grapple with protecting staff in critical industry where many cannot work from home

The North Cormorant oil platform in the North Sea, where some workers have been forced to self-isolate  © Alamy Stock Photo

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Located in stormy waters 315 miles north-east of Aberdeen, there aren’t many places as extreme for workers to be kept in self-isolation than the North Cormorant oil platform in the North Sea.

However, earlier this month Abu Dhabi energy company Taqa was forced to keep more than a dozen staff who presented with coronavirus symptoms separate from the rest of its crews at the 40-year-old facility and at another in the region, the Cormorant Alpha.

Oil and gas groups including Royal Dutch Shell, BP and Chrysaor have also reported suspected Covid-19 cases among their offshore workforces, presenting big logistical hurdles for an industry that relies on staff working and living in close quarters on remote installations where space is at a premium.

The virus has already caused havoc in the oil market as demand for crude collapsed. This disruption has been compounded by a flood of supplies hitting the price of oil hard, with producers forced to slash billions of dollars of spending and in many cases freeze share buybacks.

Energy companies are now also having to figure out how best to protect their workers, many of whom cannot work from home and are considered “key workers”, critical to ensuring the security of supply.

“Staffing will really be an issue,” said one industry executive. “The reality is that people working on these sites will get it. You can’t have the entire world in lockdown but keep these projects running just as they have been.”

Last Tuesday Taqa flew some of the workers on its North Sea platforms who had mild symptoms back to shore using a specially adapted helicopter — dubbed the “corona copter” — that a number of oil and gas companies including Norway’s Equinor, Shell and France’s Total have commissioned for dealing with suspected cases of Covid-19.

Offshore operators have been urgently assessing safe minimum staffing levels on platforms and postponing planned activities that are not critical, so workers are not deployed unnecessarily or projects started but then suspended.

Under normal circumstances 11,500 people would, on average, be working offshore on North Sea projects at any one time but this is now down to about 7,000, according to OGUK, a trade body for the region. It said this was due to what the industry calls “down-manning”, or cutting back to essential staff, rather than job losses although unions fear widespread cuts due to the conditions in the market.

Recommended

Oil

US crude oil price falls below $20

Phil Kirk, chief executive of Chrysaor, one of the UK North Sea’s largest producers, said: “We are coming into what would normally be a period of high maintenance across the industry and people are looking at what work they have planned, what is the risk associated with mobilising people or equipment and key people or key pieces of equipment not being available.

“I think for the minute, everybody is looking at that and stability. Stability of production is the most important thing for the country.”

Ineos, the petrochemicals and energy company controlled by billionaire Sir Jim Ratcliffe, said last week it would delay a planned shutdown of the Forties Pipeline System — which carries oil and gas from more than 80 fields in the North Sea — for maintenance from June to August at the earliest to avoid bringing large numbers of people together.

Oil and gas workers are now subject to temperature checks before they board helicopters to go offshore while companies are making sure there are sufficient facilities for people who show symptoms of the virus to self-isolate on platforms.

Shell said a worker who had shown symptoms was placed into quarantine on its Brent Charlie platform in the North Sea before being flown off. BP has also removed someone from its Clair Ridge installation west of the Shetland islands.

Editor’s note

The Financial Times is making key coronavirus coverage free to read to help everyone stay informed. Find the latest here.

While rig crew have been designated “key workers” to allow their children to attend schools or nurseries following national closure, OGUK has called for roles such as offshore installation managers — who are in charge of oil and gas platforms — and control room operators to be classified as critical, meaning those staff are eligible to be tested for coronavirus and could avoid self-isolating unnecessarily.

As the UK deploys police officers to train stations to enforce a ban on anything but essential travel, OGUK said there were also concerns within the industry about how to mobilise a workforce that is dispersed all over the UK.

Companies are looking at providing special buses to transport staff while it is hoped a pass carried by oil and gas workers will be sufficient to grant them freedom of movement, said Trevor Stapleton, director for health and safety at OGUK.

“They [the government] really need to focus on the offshore industry being a part of the critical infrastructure in order for us to maintain operation and security of supply,” said Mr Stapleton. “We need to get up the list of priorities in terms of testing. We are not saying we usurp testing of doctors and nurses and things like that but we should be seen to be critical,” he added.

**Chevron Announces Actions in Response to Market Conditions**

* **Reduces 2020 capital spending plan by $4 billion, or 20%**
* **Permian production guidance reduced by 20%**
* **Suspends share repurchases**
* **Actions protect the dividend, prioritize long-term value, and support industry leading balance sheet**

https://www.chevron.com/stories/chevron-announces-actions-in-response-to-market-conditions

**San Ramon, Calif., March 24, 2020** – Chevron Corporation today announced several steps it is taking in response to market conditions.

“With an industry leading balance sheet and a flexible capital program, we believe Chevron is resilient and positioned to withstand this challenging environment,” said Chevron Chairman and CEO Michael Wirth. “Given the decline in commodity prices, we are taking actions expected to preserve cash, support our balance sheet strength, lower short-term production, and preserve long-term value.”

The company is reducing its guidance for 2020 organic capital and exploratory spending by 20% to $16 billion.  Reductions are expected to occur across the portfolio and are estimated as follows:

* $2 billion in upstream unconventionals, primarily in the Permian Basin
* $700 million in upstream projects and exploration
* $500 million in upstream base business spread broadly across our U.S. and international assets
* $800 million in downstream & chemicals and other

Cash capital and exploratory expenditures are expected to decrease by $3.3 billion to $10.5 billion in 2020. Total capital and exploratory spending in the second half of 2020 is expected to be about $7 billion, an annual run rate 30% lower than the approved budget announced in December 2019.

Excluding 2020 asset sales and price related contractual effects, the company expects production to be roughly flat relative to 2019. Note that Chevron’s net production increases about 20 thousand barrels of oil equivalent per day for each $10 movement lower in Brent oil prices due to contractual effects. Permian production by the end of the year is expected to be about 125 thousand barrels of oil equivalent per day, or 20%, below prior guidance.

“The flexibility of our capital program allows us to respond to these unexpected market conditions by deferring short-cycle investments and pacing projects not yet under construction,” said Jay Johnson, Executive Vice President of Upstream, “At the same time, we are focused on completing projects already under construction that will start-up in future years while preserving our capability to increase short-cycle activity in the Permian and other areas when prices recover.”

In addition to reducing capital expenditures, the company is taking other actions to support its industry leading balance sheet including:

* The $5 billion annual share repurchase program has been suspended after repurchasing $1.75 billion of shares during the first quarter.
* The company completed the sale of its interest in the Malampaya field in the Philippines with proceeds over $500 million received in the first quarter. In April, the company expects to close the sale of its upstream interests in Azerbaijan and its interest in a related pipeline.
* The company continues to execute its plans to reduce run-rate operating costs by more than $1 billion by year-end 2020.

“Chevron’s financial priorities remain unchanged,” said Chevron Chief Financial Officer Pierre Breber. “Our focus is on protecting the dividend, prioritizing capital that drives long-term value, and supporting the balance sheet.”

**Future Financial and Operating Results**

Recent decreases in commodity prices, as a result of COVID-19 impacts on reduced demand and geopolitical pressures increasing supply, are expected to negatively impact the company’s future financial and operating results. Due to the rapidly changing environment, there continues to be uncertainty and unpredictability around the impact on our results, which could be material. We expect to provide further updates in the company's first quarter 2020 earnings press release, earnings call, and Form 10-Q.

**About Chevron**

Chevron Corporation is one of the world's leading integrated energy companies. Through its subsidiaries that conduct business worldwide, the company is involved in virtually every facet of the energy industry. Chevron explores for, produces and transports crude oil and natural gas; refines, markets and distributes transportation fuels and lubricants; manufactures and sells petrochemicals and additives; generates power; and develops and deploys technologies that enhance business value in every aspect of the company's operations. Chevron is based in San Ramon, Calif. More information about Chevron is available at [www.chevron.com](https://www.chevron.com/).

*As used in this news release, the term “Chevron” and such terms as “the company,” “the corporation,” “our,” “we,” “us” and “its” may refer to Chevron Corporation, one or more of its consolidated subsidiaries, or to all of them taken as a whole. All of these terms are used for convenience only and are not intended as a precise description of any of the separate companies, each of which manages its own affairs.*

**CAUTIONARY STATEMENTS RELEVANT TO FORWARD-LOOKING INFORMATION FOR THE PURPOSE OF “SAFE HARBOR” PROVISIONS OF THE PRIVATE SECURITIES LITIGATION REFORM ACT OF 1995**

*This news release contains forward-looking statements relating to Chevron's operations that are based on management's current expectations, estimates and projections about the petroleum, chemicals and other energy-related industries. Words or phrases such as "anticipates," "expects," "intends," "plans," "targets," "forecasts," "projects," "believes," "seeks," "schedules," "estimates," "positions," "pursues," "may," "could," "should," "will," "budgets," "outlook," "trends," "guidance," "focus," "on schedule," "on track," "is slated," "goals," "objectives," "strategies," "opportunities," "poised," "potential" and similar expressions are intended to identify such forward-looking statements. These statements are not guarantees of future performance and are subject to certain risks, uncertainties and other factors, many of which are beyond the company's control and are difficult to predict. Therefore, actual outcomes and results may differ materially from what is expressed or forecasted in such forward-looking statements. The reader should not place undue reliance on these forward-looking statements, which speak only as of the date of this news release. Unless legally required, Chevron undertakes no obligation to update publicly any forward-looking statements, whether as a result of new information, future events or otherwise.*

*Among the important factors that could cause actual results to differ materially from those in the forward-looking statements are: changing crude oil and natural gas prices; crude oil production quotas or other actions that might be imposed by the Organization of Petroleum Exporting Countries and other producing countries; public health crises, such as pandemics (including coronavirus (COVID-19)) and epidemics, and any related government policies and actions; changing economic, regulatory and political environments in the various countries in which the company operates; general domestic and international economic and political conditions; changing refining, marketing and chemicals margins; the company's ability to realize anticipated cost savings and efficiencies associated with enterprise transformation initiatives; actions of competitors or regulators; timing of exploration expenses; timing of crude oil liftings; the competitiveness of alternate-energy sources or product substitutes; technological developments; the results of operations and financial condition of the company's suppliers, vendors, partners and equity affiliates, particularly during extended periods of low prices for crude oil and natural gas; the inability or failure of the company's joint-venture partners to fund their share of operations and development activities; the potential failure to achieve expected net production from existing and future crude oil and natural gas development projects; potential delays in the development, construction or start-up of planned projects; the potential disruption or interruption of the company's operations due to war, accidents, political events, civil unrest, severe weather, cyber threats, terrorist acts, or other natural or human causes beyond the company's control; the potential liability for remedial actions or assessments under existing or future environmental regulations and litigation; significant operational, investment or product changes required by existing or future environmental statutes and regulations, including international agreements and national or regional legislation and regulatory measures to limit or reduce greenhouse gas emissions; the potential liability resulting from pending or future litigation; the company's future acquisitions or dispositions of assets or shares or the delay or failure of such transactions to close based on required closing conditions; the potential for gains and losses from asset dispositions or impairments; government-mandated sales, divestitures, recapitalizations, industry-specific taxes, tariffs, sanctions, changes in fiscal terms or restrictions on scope of company operations; foreign currency movements compared with the U.S. dollar; material reductions in corporate liquidity and access to debt markets; the receipt of required Board authorizations to effect future dividends and share repurchases; the effects of changed accounting rules under generally accepted accounting principles promulgated by rule-setting bodies; the company's ability to identify and mitigate the risks and hazards inherent in operating in the global energy industry; and the factors set forth under the heading "Risk Factors" on pages 18 through 21 of the company's 2019 Annual Report on Form 10-K and in subsequent filings with the U.S. Securities and Exchange Commission. Other unpredictable or unknown factors not discussed in this news release could also have material adverse effects on forward-looking statements.*

**Chevron confirms two US Gulf Covid-19 cases**

US Coast Guard said on Tuesday that 14 workers who were on five offshore platforms have tested positive

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* [**Worker at BP's North Slope operations in Alaska tests positive for coronavirus**](https://www.upstreamonline.com/coronavirus/worker-at-bps-north-slope-operations-in-alaska-tests-positive-for-coronavirus/2-1-785351)

[**Coronavirus**](https://www.upstreamonline.com/coronavirus)

 1 April 2020 7:08 GMT

* [**Transocean sees Chevron holding steady on key US Gulf project**](https://www.upstreamonline.com/finance/transocean-sees-chevron-holding-steady-on-key-us-gulf-project/2-1-785253)

[**Finance**](https://www.upstreamonline.com/finance)

 31 March 2020 23:00 GMT

 1 April 2020 19:25 GMT *UPDATED 2 April 2020 2:38 GMT*

By **Kathrine Schmidt**

Chevron on Wednesday afternoon confirmed two cases of Covid-19 on one of its offshore platforms in the US Gulf of Mexico.

That news came after the US Coast Guard said on Wednesday that a total of 14 US Gulf offshore workers on five different offshore facilities have tested positive for Covid-19.

That followed confirmation from BP on Tuesday that four workers who had been on one of its offshore facilities tested positive for the virus.

"Chevron notified the appropriate regulatory agencies and is following our plans and procedures to help ensure the health and well-being of our workforce," a spokeswoman said.

"Production remains at normal levels, we have temporarily suspended drilling operations and non-essential personnel have been moved off the platform." Production has not been impacted, she added.

**[Majors slash spending in oil market crunch](https://www.upstreamonline.com/news/2-1-780438)**

[Read more](https://www.upstreamonline.com/news/2-1-780438)

Chevron said that anybody exhibiting symptoms while offshore was "immediately immediately isolated and evaluated by medical personnel" and then tested for the virus at an appropriate medical facility.

**Social distancing**

Workers are also screened for symptoms and their temperatures taken before going offshore, and once offshore they are tested daily. Workers are occupying single rooms and practicing social distancing.

Non-essential workers have been moved off platforms where the cases were identified, and the company has moved from a 14 days on-14 days off schedule to a 21-21 rotation.

Chevron is also carrying out "enhanced cleaning" at all its facilities "with an additional focus on common spaces, door handles and handrails," as well as deep-cleaning areas where the workers who tested positive slept and worked.

The Coast Guard said it was not able to divulge what other companies or installations were affected, or whether the workers have been evacuated or were still on board.

**[Rosneft isolates two settlements in West Siberia after worker tests positive for Covid-19](https://www.upstreamonline.com/news/2-1-786060)**

[Read more](https://www.upstreamonline.com/news/2-1-786060)

"The (Centers for Disease Control) is the lead federal agency with respect to coordinating the response to persons displaying symptoms of or testing positive for Covid-19," the Coast Guard said in a statement to Upstream.

**CDC response**

"The Coast Guard is using our statutory authorities to direct vessel movement in support of CDC operations. However, offshore facilities do not fall under the same umbrella as those vessels and the Coast Guard doesn’t restrict the movement of those personnel."

The US Bureau of Safety & Environmental Enforcement refused to provide more details and referred comment to individual operators. A press request lodged with the CDC was not immediately returned on Wednesday afternoon.

Upstream sought comment from all operators listed as operating permanent deep-water structures in the US Gulf region, as well as all major rig contractors listed as currently operating deep-water mobile offshore drilling units.

Helicopter player Bristow Group told Upstream that it has flown more than 30 flights in the Gulf of Mexico supporting the COVID-19 response, providing services including medevac and supply delivery. The first such flight was 26 January.

BP on Tuesday revealed the first confirmed cases of Covid-19 to be made public in the US Gulf offshore region, saying [**four workers who tested positive**](https://www.upstreamonline.com/safety/bp-rejigs-procedures-after-us-gulf-workers-test-positive-for-covid-19/2-1-785181) for the virus had been on one of its offshore platforms.

**[BP rejigs procedures after US Gulf workers test positive for Covid-19](https://www.upstreamonline.com/news/2-1-785181)**

[Read more](https://www.upstreamonline.com/news/2-1-785181)

Deep cleaning was reportedly planned for those offshore facilities. BP operates the Thunder Horse, Atlantis, Mad Dog and Na Kika assets.

**Tests still pending**

Shell, one of the largest players in the region, told Upstream that it has "yet to encounter a positive Covid-19 case in the Gulf of Mexico" but that a total of four employees had been identified as "persons under investigation" after experiencing symptoms.

The Anglo-Dutch supermajor said two employees who work on a drillship contracted by Shell were still awaiting results.

"Earlier, two Shell employees working on two separate Shell-operated platforms in the Gulf of Mexico were also identified as Persons Under Investigation. Results for one PUI came back negative, while the results for the second PUI are still pending."

"We have been and will continue to take steps to protect all employees following guidance from the CDC and local public health officials while maintaining data privacy and individual health confidentiality," a spokeswoman said.

In response to the virus, the company has undertaken a range of measures, including screening all people headed offshore for symptoms and fever before leaving from a heliport or port, the spokeswoman said.

**[Norway's future output 'at risk' from downmanning](https://www.upstreamonline.com/news/2-1-784985)**

[Read more](https://www.upstreamonline.com/news/2-1-784985)

Anybody suspected of having the virus is put in isolation and then transported off the facility. After that, the facility is put in isolation for 14 days or until the person in question returns a negative test.

The company has also lengthened offshore facility hitches to 21 days from 14, and rig hitches to 28 days, to minimise exposure.

**Other operators weigh in**

Hess told Upstream that the company has had "no reported cases of Covid-19 among US employees to date."

"We have defined procedures for a variety of scenarios to protect health and safety and minimise potential impact to our operations," the company said.

"Most of our office-based staff are working remotely and we have reduced the number of personnel on offshore platforms and onshore work sites wherever this can be done safely."

**[North Sea output holds firm even as operators pare back crews](https://www.upstreamonline.com/news/2-1-783433)**

[Read more](https://www.upstreamonline.com/news/2-1-783433)

BHP said it was not aware of any suspected or confirmed cases on its Shenzi or Neptune platforms. W&T Offshore also told Upstream that none of its employees were affected.

No staff on Llog Exploration's facilities or rigs on hire have contracted Covid-19, chief operating officer Rick Fowler said. Equinor said it had no confirmed cases on its operated facilities.

"The company has implemented measures in line with recommendations from national and international health authorities," a spokesman for the Norwegian major said.

"In general we are reducing the manning on non-essential tasks and operations that can wait as a preventive measure to reduce the risk of contamination in our operations."

Occidental, which operates a wide range of facilities after its acquisition of Anadarko, said its offshore facilities "at this time, remain free of any confirmed cases."

"We are conducting health checks at all our ports of entry to the Gulf of Mexico, as well as reconfiguring our crew flights and shifts, as appropriate.

"Additionally, we always adhere to federal and local guidance, updating the regulatory authorities and coordinating with other Gulf operators and our service providers."

A spokesperson for Murphy Oil declined to comment.[(Copyright)](https://www.upstreamonline.com/terms?tab=digital)

**PUBLISHED 17:17 MARCH 5, 2020**

**UPDATED 17:36 MARCH 5, 2020**

**COVID-19 no hit for Russian oil exports to China**

[By Kostis Geropoulos](https://www.neweurope.eu/author/kostis-geropoulos/)

Energy & Russian Affairs Editor, New Europe

***Austrian health professionals wait to check the body temperature of participants at the OPEC+ meeting at the OPEC headquarters in Vienna, Austria, 5 March 2020.***

EPA-EFE/CHRISTIAN BRUNA

[](https://www.ourworld.co/)

***Virus cuts demand, lowers prices, on OPEC+ table talk***

Russia’s oil exports to China were almost unaffected last month amid the coronavirus outbreak as the East Asian country has been benefiting from lower oil prices and building its strategic oil reserves, **Chris Weafer**, founder of Macro-Advisory in Moscow, told New Europe on 4 March.

“You would expect the effects might come later because a lot of the oil going to the East Siberia-Pacific Oil Pipeline, the ESPO pipeline, goes anyway into storage in China, fulfilling the long-term contracts. As the storage capacity in China perhaps grows or reaches capacity, then we are likely to see a slowdown in deliveries, delayed deliveries. For now, what I have been hearing is that China is just taking the oil into storage,” Weafer said, adding the China has plenty of storage and the Chinese have been taking advantage of the lower oil price and building up their long-term strategic oil reserves. “So, in that sense they do have the capacity to take extra oil and to build up their long-term storage whereas with gas, they don’t have the means to store the LNG (liquified natural gas) and therefore they are cancelling contracts and turning LNG tankers away or making them wait,” Weafer said.

The Macro-Advisory expert noted that the price of gas has come crashing down because of the coronavirus but also because gas producers were already suffering due to the climate in Europe in particular but in North America as well which saw greatly reduced demand for gas and rising supply in terms of LNG this winter. “Global prices were already weak and now they are hit hard by the virus effect,” he said.

As the coronavirus outbreak and lower demand has led to lower oil prices, the Organization of Petroleum Exporting Countries (OPEC) and non-OPEC members led by Russia, sometimes referred to as OPEC+, were expected to meet on 5-6 March to discuss further production cuts.

Russia has sent mixed signals to OPEC on the possibility of further oil production cuts. Russian President **Vladimir Putin** said on 1 March that Russia can cope with the recent decline in oil prices but said Russia will cooperate with OPEC+ to balance the oil market. “I want to stress that for the Russian budget, for our economy, the current oil prices level is acceptable,” Reuters quoted Putin as telling a meeting with Russian energy officials and producers.

Weafer noted that Russia can withstand lower oil prices more than oil producers in the Gulf. “This time around, Russia is in a completely different situation than it was in 2008-09 and 2014 and the difference now is the ruble is completely flexible and the ruble is allowed to free float and that acts as a counterbalance or compensating factor that we did not have before. So, at the current exchange rate the Russian budget should balance at approximately 47 dollars,” he told New Europe. “In many ways, I don’t want to be naïve about it but Russia is in stronger financial position today to withstand this period lower price is a direct result of having to deal with western sanctions,” Weafer said. “If Russia did not have to deal with western sanctions and did not take the actions it was forced because of sanctions it would be in a much more difficult position today,” he added.

Nevertheless, the Moscow based expert stressed that the Kremlin would certainly want to cooperate with the Saudis. “The relationship between obviously Russia and Saudi Arabia, the gulf Arab countries, has become very important in recent years so I think at a political level they will certainly want to cooperate and they would like to be seen to do it. So, I would imagine that Russia certainly will be looking to work with OPEC and to participate in the deal but there is enormous reluctance amongst the oil companies, particularly, of course, Rosneft,” he said.

He explained that the attitude of the Russian oil producers is that the OPEC+ deals which support oil price are only helping to sustain the American oil industry because they don’t participate with any cuts and high price suits them and allows them to increase their global market share. “There is this resentment that what Russia and OPEC are doing has really benefited the US market producers who are competing and taking market share away,” Weafer said, adding: “My guess is that will get statements of cooperation but I would imagine Russia will cut relatively little in terms of production.

Gazprom Neft’s COVID-19 counter-proliferation strategy is being implemented in every locality in which the company operates

27 March 2020

[SAFETY](https://www.gazprom-neft.com/press-center/news/?rubric=safety)

A full COVID-19 counter-proliferation strategy has been put in place throughout the Gazprom Neft Group of Companies, with meetings of HQ control staff being held — remotely — every day. Baseline scenarios have been modelled on the potential development of the COVID-19 threat for employees and contractors, and group-wide barriers — including technical and organisational initiatives to prevent the spread of infection — put in place. Training sessions have been held on ensuring business continuity in the face of COVID-19 infection being identified in the workplace.

Gazprom Neft moved part of its workforce to remote working (“working from home”) with effect from 19 March. This will continue until 30 April, and may be extended thereafter. All pregnant women, employees over 60 years old, any employee with a disability, and any employee with any chronic cardio-vascular or respiratory condition have been moved to remote working as a priority.

Approximately 60% of the company’s head office staff in St Petersburg are now working from home. Approximately 15% of the company’s total workforce is now working remotely, including personnel at industrial enterprises, with this number set to increase.

The company has introduced additional previously unavailable digital remote-working services, guaranteeing the continuity of production processes as employees move over to remote working. The company has expanded opportunities for employees to use technical equipment and software provided by the company, at home.

Working shifts at remote oil production facilities have been increased to 60 days. Any employee unable to join their standard shift on time as a result of their previous shift being extended will nonetheless be paid the upfront portion of their salary.

The group’s Moscow and Omsk Refineries will maintain production volumes of petroleum products as planned. The high level of automation throughout the company’s refining facilities means personnel are able to maintain oversight of technological processes from control rooms remotely, in compliance with infection-control initiatives.

All corporate events at Gazprom Neft have been postponed indefinitely, and employees’ participation in external events cancelled. Any meetings involving more than 10 people are now being held through video conferencing.

Business trips abroad have been terminated, and those within the Russian Federation severely curtailed. All information on employees returning from trips abroad is being centralised. Any employee returning from abroad is required to self-isolate at home for a period of 14 days.

Disinfection of contact surfaces is ongoing throughout production facilities and office premises; hand-sanitiser dispensers have been installed, viricidal filters fitted in ventilation systems, and anti-bacterial sterilisation lamps placed in employee shared spaces. Daily remote temperature monitoring of employees has been put in place. All company offices are equipped with first-aid points at which employees can present for coronavirus testing.

The company’s mobile-based corporate news service now offers a special information feed accessible to all Gazprom Neft employees.

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**Coronavirus Hits Russian Markets | April 2**

The latest on how the ruble and Russian stock markets are reacting to the coronavirus.

Updated: 8 hours ago

**Financial markets have seen extreme volatility as the coronavirus continues to spread.**EPA / TASS

The Russian economy has been rocked by the coronavirus [outbreak](https://www.themoscowtimes.com/2020/03/16/coronavirus-in-russia-the-latest-news-march-16-a69117), and the breakdown of the OPEC+ oil production pact between Russia and Saudi Arabia. The turmoil has shocked traders around the world and resulted in sharp volatility on the Russian stock markets and swings in the value of the ruble.

NEWS

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**The latest on the markets, as of 10.30 Moscow-time, April 2:**

— Oil prices jumped 10% overnight, pushing Brent crude above $27 a barrel for the first time in a week.

— That climb help the ruble strengthen, up 1% against the U.S. dollar at 77.9 on Thursday morning.

— Russian stock markets were also in the green, with the RTS Index up almost 3% and the MOEX Index up 1.6% in the first minutes of trading. Unsurprisingly, energy majors topped the leaderboard, with Lukoil, Tatneft, Rosneft, Surgut and Novatek the top risers.

— The ruble’s relative strength in recent days “could be attributed to investor expectations that oil prices have bottomed out from the current levels,” argued analysts at VTB Capital. “Another important tailwind for the currency remains hard-currency selling by the Central Bank. The regulator reported that it had scaled up hard-currency selling to the equivalent of 16 billion rubles on Tuesday, up from 13.3-13.4 billion in the previous several days.”

**April 1, Moscow close:**

— It was a relatively muted day on the Russian financial markets, as traders await more news on the global spread of the coronavirus pandemic.

— The ruble was barely changed, standing at 78.6 as trading in Moscow wound to a close, unmoved as prices for benchmark Brent crude oil held above $25 a barrel.

— Stock markets were in the red, but recovered slightly from their opening levels. The RTS Index was down 2.6%, while the MOEX Index lost 1.4%.

— At the global level, attention remains on whether the world’s equity markets have hit their bottom, or if the recent rally is sign of a “dead cat bounce” — a mini recovery before a continued slump. Oliver Brennan of T.S. Lombard fears the latter, in a research note published Wednesday, he highlighted how uncertainty over the spread of the virus and potential infections, particularly in the U.S., shouldn’t warrant market optimism just yet.

**Moscow open, April 1:**

— The Russian stock market was jolted at the opening Wednesday morning — the first trading session of the second quarter — with the RTS Index falling 3.2% and the MOEX Index down 1.6%. Shares in financial services group Tinkoff Bank and oil major Tatneft were the biggest losers. In the U.S. and Europe, stock markets were shaken by a string of profit warnings and major companies slashing planned dividend payouts.

— The ruble also slipped back slightly, losing 0.6% overnight to trade at 79 against the U.S. dollar.

— Traders hoping for more insight on how the economic fallout of the coronavirus is shaping up were left unmoved by this morning’s usually influential purchasing managers’ index (PMI) readings. Survey data collected in mid-March showed a dip in confidence, but is unlikely to have captured the change in mood which occured in the final week of March, as Russia banned international travel and Moscow went into a strict lockdown.

**March 31, Moscow close:**

— Tuesday saw the tentative recovery on the Russian financial markets continue, with the ruble, shares and oil all making advances.

— The ruble was up 1.5% on the day against the U.S. dollar at 78.1. This was the tenth trading day in a row where the currency held between 77 and 82 against the greenback following its dramatic collapse after Russia pulled out of the OPEC+ oil alliance deal in early March

— The RTS Index was back above 1,000 points after a 5% gain Tuesday, while the MOEX Index added 2.6% to hover just below the 2,500 mark.

— Commenting on the tentative recovery in the global markets, Craig Erlam of OANDA said: “It’s still early days and I am not at all convinced we’ve bottomed yet but five positive days in six is definitely encouraging. Investors will no doubt just be relieved that the incredible levels of volatility appear to be behind us. This at least provides the foundations for a sustainable rebound even if we see another test of the lows in the near-term.”

**March 31, Moscow open:**

— Analysts saw signs of optimism in the global financial markets overnight, although with oil prices remaining under pressure, the recovery in Russian assets was limited.

— Benchmark Brent crude hovered around $22.50 a barrel after setting new multi-decade lows Monday, with the ruble trading at 78.9 against the U.S. dollar, up 0.6% from Monday’s closing level.

— The Russian stock markets recorded a stronger start to the day, with the MOEX Index up 2.6% and the RTS Index adding 4%. The rise was across the board with no companies seeing their shares in the red.

— VTB Capital’s Maxim Korovin said: “Monday brought some reassuring news regarding the global fight against COVID-19. The World Health Organization said there were signs of some stabilisation in Europe’s outbreak, with European lockdowns starting to bear fruit. Meanwhile, global monetary and fiscal authorities continued stepping up economic relief measures. Positive signals also came from macro data this morning: China Manufacturing purchasing managers’ index (PMI) surged to 52 from the record low of 35.7 last month, while non-manufacturing PMI increased to 53.3 from 42, suggesting a broad improvement of sentiment across the economy.”

**March 30, Moscow close:**

— Oil prices fell heavily Monday as Saudi Arabia said it would raise its exports to a record high of 10.6 million barrels a day starting May. Brent crude dropped 12% to below $22 a barrel.

— Despite the oil rout, the ruble managed to slightly improve throughout the day, to close out trading in Moscow at 79.8 against the U.S. dollar.

— The stock markets were also largely unmoved in a day of rare stability. The RTS Index was flat, while the MOEX Index was up 0.9% for the day.

— The market could yet be shook in overnight trading as U.S. President Donald Trump and his Russian counterpart Vladimir Putin are set to discuss the global oil market and U.S. sanctions against Russia on a telephone call Monday evening.

**March 30, Moscow open:**

— As oil prices slipped to a new 17-year low, with benchmark Brent crude trading at $23 a barrel, the mounting pressure on Russia’s energy-heavy economy sparked a new round of volatility on Moscow’s financial markets.

— The ruble fell to 80.2 against the U.S. dollar, down 1.7% over the weekend.

— Russia’s stock markets were in the red, the RTS Index losing 2% at the open and the MOEX Index down 1%.

— A study by the Organization for Economic Cooperation and Development (OECD) estimated economic activity would fall by one-quarter in economies with strict lockdowns and quarantines — meaning a two percentage point fall in annual GDP for every month of quarantine. A city-wide [shutdown](https://www.themoscowtimes.com/2020/03/29/moscow-orders-citywide-quarantine-starting-march-30-a69789) in Moscow started Monday, with Prime Minister Mikhail Mishustin putting pressure on other Russian regions to do the same.

**March 27, Moscow close:**

— A slow start to the day on the financial markets in Russia grew weaker as traders in Europe and the U.S. clocked in, with Moscow ending the week with red across the board.

— The ruble lost almost 3% against the dollar, closing off the week at 79.1. Yet again it was falling oil prices which did the damage as the cost of a barrel of Brent crude slipped below $25.

— Russian stock markets also headed down, taking the steam out of an otherwise impressive recovery this week. The RTS Index lost 6% and the MOEX index shed 3.5%, with the losses being fairly evenly spread across Russia’s bluechips.

**March 27, Moscow open:**

— It was another quiet opening on Russia’s financial markets, at the end of a week which saw Moscow’s efforts to battle the coronavirus accelerate. Russia’s financial markets are set to stay open for trading next week, despite the emergency nationwide holiday [announced](https://www.themoscowtimes.com/2020/03/25/in-first-address-to-nation-on-the-coronavirus-putin-holds-back-from-stringent-measures-a69748) by President Vladimir Putin earlier this week.

— The ruble weakened a little at the open in Moscow, down 0.5% against the U.S. dollar and now trading at 77.8, while both the MOEX Index and the dollar-denominated RTS Index were slightly in the red, but with moves reminiscent of more normal times: -0.5% on the MOEX Index and -1.5% on the RTS Index.

— The stable end to the week marks a pronounced turnaround for the Russian markets, which have followed U.S. and global markets higher, as confidence over governments’ economic response to the coronavirus gains momentum. The RTS Index is now up 25% from its recent low registered just nine days ago, and is back hovering around the psychologically-important 1,000 mark.

**March 26, Moscow close:**

— The Russian financial markets registered one of their calmest and quietest days in weeks, with modest gains and no large swings throughout the day.

— The ruble continued to strengthen, picking up 1% against the U.S. dollar to stand at 77.4.

— Russian stock markets were also in the green, with the MOEX Index adding 1.5% and the RTS Index up 3%.

— Still, analysts described the financial markets as being in a “delicate balance”. While the “panicked falls have slowed down due to unprecedented support measures outlined around the world … significant uncertainty remains … and there are no reasons for a sustained recovery in risky assets, including the ruble,” [said](https://e-markets.nordea.com/#!/article/56565/nordaily-tekushchee-ravnovesie-na-rynkah-vyglyadit-dovol-no-hrupkim)Nordea Bank’s Grigory Zhirnov

**March 26, Moscow open:**

— It was a stable opening across the board Thursday morning in Moscow, as Putin’s address to the nation, the imposition of an emergency week-long holiday, the grounding of all international flights and a pending shut-down of bars, cafes and shops in Moscow failed to jolt the markets too much.

— The ruble was barely moved, trading at 78.8 against the U.S. dollar, slightly weaker than Wednesday’s levels, but comfortably stronger than the record lows registered last week.

— The stock markets were also steady, with the RTS Index and MOEX Index both down by 1.3% and no companies registering individual share price moves of more than 3.5%

**March 25, Moscow open:**

— A sea of green greeted Moscow traders as they clocked in Wednesday, with the U.S. stock markets posting their biggest one-day gain Tuesday since 1933, and Asian markets rallying overnight as investors seemed to be buying into emergency stimulus packages from central banks and governments around the world.

— Russia picked up the baton, following Tuesday’s strong gains with the MOEX Index adding 3% at the open and the RTS Index up 4%. Not a single stock was in the red, with Aeroflot and Rosneft the strongest performers. Aeroflot has climbed almost 40% in the last week and Rosneft is up one-fifth since its closing price Monday.

— The ruble also saw another stable overnight trading session, with the currency up 0.6% against the U.S. dollar to 77.8.

— The Russian story was helped by stronger oil prices, with Brent crude oil picking up 2% to almost $28 a barrel. However, ING slashed its forecast for average oil prices over the next three months to $20, citing a lack of signs that either Russia or Saudi Arabia are ready to come to the negotiating table for a renewed production cut deal.

**March 24, Moscow close**

— The ruble held its own throughout the day, managing to stay the better side of 80 against the U.S. dollar for the entire trading session in Moscow, currently standing at 78.6.

— Stock markets also performed strongly, recovering losses of recent days. The RTS index added almost 10%, while the MOEX Index was up 7.5%. Metal and mining companies topped the leaderboard, with the world’s largest palladium maker Nornickel adding a hefty 17%, Polymetal climbed 15% and aluminium firm Rusal was up by 12%.

— Commenting on another day of big moves in the global financial markets, Craig Erlam of OANDA said: “It’s been an incredibly turbulent month, one in which central banks and governments have been forced to announce extreme measures to combat the coronavirus crisis. Despite all of this stimulus, the stock market has continued to plummet, registering the kind of swings we very rarely ever see. Considering how these markets have traded over the last month, I'm certainly not confident that the worst of the rout is behind us.”

**March 24, Moscow open:**

— The ruble picked up support Tuesday morning, gaining more than 1% against the U.S. dollar to print 78.5 against the greenback as the Moscow trading session got underway. The dollar was weaker against most global currencies following the U.S. Federal Reserve’s latest package of monetary stimulus, unveiled Monday evening.

— The Russian stock market also registered a bumper start to the day. The MOEX Index was up almost 5% and the RTS Index jumped 7%.

— Russia’s state-backed oil giant Rosneft was top of the leaderboard, with a 9% rise in its share price, as the company announced it would take advantage of the market turmoil to [accelerate](https://www.rosneft.com/press/releases/item/200203/) its share buyback program. The company bought shares worth around 400 million rubles ($5 million) on Monday, VTB Capital estimated.

**March 23, Moscow close:**

— The ruble recovered some early lost ground, crossing back below the 80-mark against the U.S. dollar, holding at 79.8 as Moscow traders started packing up for the day. The currency picked up after the U.S. Federal Reserve [announced](https://www.federalreserve.gov/newsevents/pressreleases/monetary20200323b.htm) a package of unlimited quantitative easing and new measures to increase liquidity in the world’s largest economy.

— The Russian stock markets also pared losses, but still stood in the red for the day, with the RTS index and MOEX Index both down around 3%.

— Economists at Nordea [highlighted](https://e-markets.nordea.com/#!/article/56453/nordaily-na-rynkah-prodolyoayut-dominirovat-negativnye-nastroeniya) that global markets were still jittery, as “the situation with the spread of the coronavirus remains worrisome, with the risks of further deterioration in mood on the global markets elevated. At the start of the new week, the external background for the ruble remains negative.”

— Oil prices continued to be a drag on the Russian financial markets, as Brent crude shed another 4% to fall below $26 a barrel Monday afternoon. As countries go into lockdown, sapping global energy demand by as much as 10% according to Raiffeisen Bank, and Saudi Arabia ramps up its production, analysts at the Austrian bank expect the price to fall even further in the coming weeks.

**March 23, Moscow open:**

— With little signs of a recovery in oil prices, the ruble remained under pressure as the trading week got underway in Moscow. The currency stood at 80.8 against the U.S. dollar, 1.2% weaker than at the end of last week.

— The Russian stock markets plunged at the open, with the RTS Index losing 5.5% and the MOEX Index down 4%.

— Forecasts for the economic fallout of coronavirus continue to darken as more and more countries enter lockdown and the spread of the disease shows few signs of slowing. The CEBR, a British think tank, [warned](https://cebr.com/reports/a-world-recession-is-now-almost-a-certainty-with-global-gdp-set-to-decline-twice-as-much-as-during-the-financial-crisis-the-challenge-now-is-to-prevent-the-recession-from-turning-into-a-1930s-style/) Sunday that GDP will fall twice as sharply as during the 2008 financial crisis, adding that the task of governments should be to prevent the coronavirus recession turning into a 1930s-style depression.

— The group said it expected the Russian economy to shrink by 4% in 2020, with little prospect of a post-crisis rebound.

**March 20, Moscow open:**

— After days of heavy losses the Russian ruble strengthened overnight, falling back from one of its weakest ever levels. The ruble was trading at 77.5 — up 2% — against the U.S. dollar Friday morning in Moscow. Benchmark Brent crude oil climbing back above $30 a barrel helped support energy-dependent currencies like Russia’s.

— Volatility is likely to remain sharp as traders await a crunch meeting of Russia’s Central Bank on Friday afternoon. The market consensus is that the Bank will hold rates at their current level of 6%, although Elvira Nabiullina' statement will be closely watched for signs of how the Bank views the economic fallout of the coronavirus. The Bank faces a huge conundrum over the coming weeks and months over how to support the Russian economy without sparking further devaluations of the ruble and inflation.

— The Russian stock markets were also in the green, with the RTS Index adding more than 7% and the MOEX Index up 5%. Aeroflot recovered a huge 14% in its share price, while energy majors and retailers also performed strongly.

— While Russian energy companies have “once again” been saved by interventions from the Russian government, producers are not out of the woods yet, VTB Capital said in its Friday morning research note. “The formidable $123 billion loss in annual oil revenues is shared between numerous parties: the budget, crude producers, refineries, customers and even the population. However, the loss is heavy and, although ring-fenced and supported, the Russian oil industry is likely to face challenging times ahead.”

**March 19, Mosocw close:**

— The ruble flitted up and down throughout the day, but closed the Moscow trading session where it started — 80.5 against the U.S. dollar. This is around the levels last seen in the 2016 financial crisis and on par with the ruble’s weakest level against the dollar since it was redenominated in the wake of the 1998 financial crisis in Russia.

— Russia’s Central Bank announced more details on its measures to stop the collapse of the currency, stepping up its sales of foreign currencies — the logic being higher demand for rubles can keep its value up. The regulator also shared more details on how it will use the proceeds from the sale of its stake in Sberbank to Russia’s Finance Ministry to increase its ruble-buying program.

— Russia’s stock markets notched up one of its better days in recent weeks, with the RTS Index up 6%. News of measures to [support](https://www.themoscowtimes.com/2020/03/19/russia-props-up-ruble-oil-producers-a69682) Russia’s oil companies through the period of low prices helped energy companies score double-digit climbs.

**March 19, Moscow open:**

— The Russian ruble remains at its lowest level in five years, having crashed through the benchmark rate of 80 against the U.S. dollar. Overnight the currency slipped as low as 82.7, before recovering slightly to 80.5 as trading in Moscow got underway. That marks a 32% depreciation since the start of the year.

— Traders don’t expect the currency to stabilize anytime soon. The ruble is already the worst performer this year, and the futures market has it as the second most volatile currency over the next three months, business site RBC [reported](https://www.rbc.ru/finances/19/03/2020/5e72431a9a7947446267a1b2) Thursday. Against huge economic uncertainty, the U.S. dollar is now stronger than it has ever been, as [calculated](https://think.ing.com/articles/fx-armageddon) by its reading on the trade-weighted index.

— Russian stock markets, however, were stable at the open, with both the RTS Index and the MOEX Index showing little movement from Wednesday’s closing level.

— Nevertheless, the readings were only balanced by some big share price moves in opposite directions. [Retailers](https://www.themoscowtimes.com/2020/03/18/russias-supermarkets-defy-coronavirus-economic-cost-a69669) such as Lenta and Magnit saw their share prices jump, while national airline Aeroflot shed another 7%. A poster child for the coronavirus hit, just one month ago Aeroflot was worth $2.2 billion, the latest plunge takes its dollar market capitalization below $750 million.

**March 18, Moscow close:**

— The Russian ruble has fallen to its lowest level in five years, as the economic fallout of the coronavirus continues to weigh on the Russian financial markets. The ruble slipped to 79.8 against the U.S. dollar Wednesday evening in Moscow, putting the currency down more than 25% for the year so far.

— The plunge came as oil prices — which have a large impact on the Russian economy — also dropped to their lowest level since the 2014-16 price crisis. Brent crude was down below $27 a barrel. It started the year at $66.

— Russia’s dollar-denominated RTS index lost more than 9% Wednesday, while the MOEX Index, calculated in rubles, was down 3%.

— Analysts sharpened their assessments of how bad the economic costs of coronavirus will be around the globe. Deutsche Bank warned of “a severe global recession” with “declines in GDP growth … to exceed anything previously recorded going back at least to World War II.”

— Russia’s economic response to the crisis remains moderate compared to the huge rescue packages being outlined in the U.S. and Europe. All eyes are on a crucial meeting of the Central Bank on Friday in Moscow, as governor Elvira Nabiullina will weigh up how to respond to the economic turmoil, a falling currency and heightened inflation prospects.

**March 18, Moscow open:**

— The ruble slipped heavily overnight, trading at 76.8 against the U.S. dollar Wednesday morning in Moscow. Analysts say the mammoth stimulus [package](https://www.wsj.com/articles/trump-administration-seeking-850-billion-stimulus-package-11584448802) unleashed by the United States and other developed economies around the world accelerated a rush into dollar-backed assets, with currencies of emerging markets suffering.

— The Russian [stock markets](https://www.moex.com/en/)were knocked back, picking up from a poor session in Asian trading, and taking the steam out of a bounce in the U.S. markets overnight. The RTS index was down more than 4% at the open, and the MOEX Index shed more than 1%. Russia’s national airline, Aeroflot, was one of the biggest fallers, with Wednesday morning’s [tumble](https://www.themoscowtimes.com/2020/03/17/russian-airlines-face-coronavirus-bankruptcy-government-warns-a69656) meaning the company has now lost half its value — around $1 billion — in the space of four weeks.

— The ruble’s woes were compounded as oil prices once again started the day in the red, with benchmark Brent crude falling close to $28 a barrel, setting a new low not seen since January 2016. “The pressure on the oil market has been relentless, [and] risks remain to the downside as we move into the second quarter,” said ING’s Warren Patterson. “The demand picture continues to deteriorate as more countries implement shutdowns and put in place travel restrictions which have seen airlines cut capacity. Meanwhile the pickup in oil supply from April following the breakdown of OPEC+ talks does mean that these weak prices are likely to linger for quite a while longer. Lower prices are clearly going to hurt oil exporting countries.”

**March 17, Moscow close**:

— After picking up in the morning, the ruble slipped back to fall below the 75-mark against the U.S. dollar. A $1 bill would get you 75.2 rubles on the money markets Tuesday evening. The 1% daily fall would be big news on any number of other days, but following huge volatility over the last two weeks, traders might count today’s move as a sign of stability.

— The Russian stock markets also reversed their earlier upward trend, falling back in afternoon trading. The RTS index, denominated in rubles, was down 4.3% for the day and the MOEX Index dropped 2.8%. Construction group LSR fell more than 10%, followed by retailer Detskiy Mir and financial services group Tinkoff.

— Brent crude oil dropped back below $30 a barrel in Tuesday afternoon trading.

— “The situation remains tense, as the pandemic in Western economies has not yet passed its peak — and perhaps is the beginning,” said Sergei Suverov, analyst at BCS Premier. “Now the main question is whether the authorities will be able to help with large-scale anti-crisis stimulus to prevent mass bankruptcies.”

**March 17, Moscow open**:

— Markets were subdued Tuesday morning, with the huge overnight moves which have characterized trading in the last few weeks failing to materialize. The calm comes after another bloodbath on Wall Street on Monday, where stocks fell 12% in the worst daily performance in 33 years. “The Federal Reserve's emergency move Sunday apparently failed to impress markets Monday, with investors questioning the efficiency of monetary policy for fighting the virus outbreak,” wrote VTB Capital’s Maxim Korovin in his Tuesday research note to clients.

— The ruble gained almost 1% overnight, trading at 74 against the U.S. dollar.

— The Russian stock markets registered small but steady gains, reversing some of yesterday’s losses. The dollar-denominated RTS index was up 1.6% to 982 points in the first minutes of Tuesday trading, while the ruble MOEX Index climbed by the same extent, moving back above 2,300. Blue chips Gazprom, Sberbank and Sistema were top of the leaderboard.

— Brent crude oil also climbed overnight, hovering slightly above the benchmark $30 a barrel price which traders have fixed on since the [collapse](https://www.themoscowtimes.com/2020/03/16/war-with-opec-cant-end-well-for-russia-a69636) of the OPEC+ deal earlier March.

**March 16, Moscow close:**

— The ruble fell again Monday, down 2.5% to start off the week, trading at 74.2 against the U.S. dollar. Earlier in the day, the currency fellow the benchmark level of 75 to the dollar.

— The Russian stock market also lost 5% as global stocks plummeted following an emergency rate cut from the U.S. Federal Reserve announced late Sunday. The RTS index, which is denominated in dollars, stood at 938 points (-5.4%), while the ruble-based [MOEX Index](https://www.moex.com/en/) was at 2,216 (-4.3%).

— Oil slipped to a fresh multi-year lows, with Brent crude falling 10% below $31 a barrel. Edward Moya, analyst at OANDA said: “Oil’s worst-case scenario seems to be coming true.  The coronavirus is paralyzing economies across the world and no-one has any clue how much worse it will get. You can basically start pricing a complete collapse in crude demand for much of the world.”

<https://www.ft.com/content/ba417ace-6474-11ea-b3f3-fe4680ea68b5>

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Get the newsletter now The Big Read Coronavirus Add to myFT Why coronavirus could hit Iran harder than US sanctions The outbreak may throttle many of the new trading relationships on which Tehran depends © Bloomberg Save Andrew England and Najmeh Bozorgmehr in Tehran MARCH 22 2020Print this page64 Be the first to know about every new Coronavirus story Get instant email alerts For almost two years, Iranian leaders have vowed to resist the “economic war” the US is waging against their country as American sanctions have strangled the Islamic republic’s economy ever tighter. President Hassan Rouhani even suggested that the mission had been accomplished when he addressed the nation in February. “Never in our history have we experienced an economy without oil,” Mr Rouhani said with an undisguised hint of pride. “We have come to realise we can govern without oil.”  His message was clear: a nation with some of the planet’s largest crude and gas reserves had been forced to break its addiction to oil. And it had survived. Three days later, Iran reported its first cases of coronavirus. The outbreak not only triggered a health crisis, but also exposed the fragility of Iran’s survival mechanisms. Some argue the outbreak is succeeding where US President Donald Trump’s sanctions failed: throttling many of the regional trading routes the republic has become more dependent on over the past two years. In the weeks since, the number of infections has soared to 20,610 as of Saturday and the official number of those who have died has reached 1,556. The production line in the Iran Khodro car factory. The quasi state-run company says the outbreak has had 'no impact on the trend of production' © Kaveh Kazemi/FT As a result, the republic is more isolated than ever and appealing for international aid, including a $5bn loan from the IMF, while complaining that sanctions are crippling its ability to respond to the crisis.  Many of its neighbours — including Iraq, Turkey, Pakistan, Afghanistan and Armenia — have closed their borders or imposed restrictions on crossings and trade. Only one foreign airline, Qatar Airways, still flies to Iran.  “Coronavirus has struck a more severe blow to Iran’s economy than US sanctions over a very short period,” says Saeed Laylaz, an Iranian economist. Iran’s survival strategy has been threefold since Mr Trump withdrew the US from the 2015 nuclear deal Tehran had signed with western powers and then imposed the “toughest ever” sanctions. It has sought to bolster domestic production, particularly in key sectors such as petrochemicals, steel, cement, agriculture and manufacturing, while attempting to boost non-oil exports, including face masks to China. It also shifted its focus to regional markets, both as a destination for Iranian goods and as transshipment hubs. Iranian businessmen tell apocryphal tales of middlemen traversing the region with suitcases packed with hundreds of thousands of dollars; of developing a complex web of trading routes; and setting up offshore offices and front companies to keep goods and finances flowing, albeit at a higher cost and with longer delivery times. The republic produces enough food for its 80m population and exports to neighbours. Iranian companies account for about 70 per cent of the country’s pharmaceutical needs, with the remainder — either finished medicines or inputs — imported. Neither sector is sanctioned, but the difficulty of conducting financial transactions, with few banks willing to touch anything connected with Iran, has led to a shortage of some specialist medicines, such as cancer drugs — and now equipment to fight coronavirus.  Even before the outbreak, Iranian officials knew they could not disguise the damage the US sanctions have wrought, particularly on poorer Iranians, as oil exports have plunged from 2.8m barrels a day two years ago to a few hundred thousand. The IMF estimates the economy contracted by 9.5 per cent last year; the rial lost more than 50 per cent of its value in the months after Mr Trump unilaterally withdrew from the nuclear deal, inflation soared above 40 per cent and foreign companies fled the country. But there was a growing belief, at least among officials, that Iran was proving it could absorb the shocks. Supermarket shelves have remained full during the coronavirus outbreak, partly because in its preparations for sanctions-related shocks the republic has built up food reserves, Iranian analysts say. Farshad Moghimi the new managing director of Iran Khodro Car Factory in his office in Tehran © Kaveh Kazemi/FT “They say, sanctions are like a knife. The more you use it, the blunter it becomes,” Mohammad Nahavandian, vice-president for economic affairs, told the Financial Times before the extent of Iran’s coronavirus crisis was clear. “There was a time that just one sentence in a statement made by an American official, president or otherwise, could send waves of worry in the Iranian economy. Not any more.” From its shrunken base, growth was expected to be flat this year, the IMF predicted. And in the absence of foreign competition, some Iranian businesses were in expansion mode.  The central bank said this month that non-oil growth expanded by 1.3 per cent in the first nine months of the financial year that ended on March 19. Adding that the agriculture, industrial and mining sectors and services grew by 7.8 per cent, 7 per cent and 1.2 per cent respectively between September and December. “This exodus [of foreign companies] has helped Iran to stand on its feet more and produce most of the spare parts that used to be supplied by these partners,” says Farshad Moghimi, chief executive of Iran Khodro, which claims to be the Middle East’s largest carmaker. Seven months ago, the quasi state-run company was a stark example of the damage US sanctions had wrought on the country’s manufacturing sector as foreign partners, including Peugeot and Renault, suspended their operations in Iran. Fear and chaos swept across the industry, Iran’s biggest private sector employer. Thousands of jobs were lost and nearly 200,000 new cars sat unfinished as supply lines for imported parts from Europe dried up.  The local industry appeared close to collapse. Yet, before the virus outbreak, Iran Khodro was being touted as a model of the republic’s “resistance” as it ramped up production. Mr Moghimi, previously deputy industries minister, took over the running of the company in August after his predecessor was sacked. At the time, Iran Khodro’s output had fallen to 600 vehicles a day. This year, the company’s factories, backed by government funding, have been operating 24 hours a day, six days a week, with 2,000 cars rolling out of its plants each day, says Mr Moghimi. The plan was to increase that to 2,500 a day. In February, Iran’s defence minister, Brigadier General Amir Hatami, visited the factory, and described how the military is using its technology to develop components that the private sector cannot, such as electronic control units. Asked how the company manages to procure imports, Mr Moghimi says: “There are many individuals and countries in the world who are opportunists.” Since the virus outbreak Iran Khodro says 2,000 of its of 57,000 workers with underlying health issues have been sent home on paid leave, but it insists the outbreak has had “no impact on the trend of production”.  Men carry their goods through mostly closed Tehran's Grand Bazaar, Iran, last week. Coronavirus is curtailing the Persian New Year © Vahid Salemi/AP Mehdi Arjomandi’s home appliances factory is among those that have continued operating through the health crisis. But the firm has cancelled overtime and it takes longer to receive parts from China because its factories are not working to full capacity, he says. He founded Vidas, whose products include irons, vacuum cleaners and coffee machines, the last time Iran was under strict sanctions in 2014. But as he sought to grow, the nuclear deal was implemented and foreign goods flooded back in. Since Mr Trump withdrew the US from the agreement, he has been in expansion mode again, doubling production. About 80 per cent of the parts for the 25,000 items his factory churns out are now produced domestically. “If it was not for Mr Trump . . . Iranian industry would not have had the growth it has,” Mr Arjomandi says.  Yet, he does not attempt to sugarcoat the situation. “While many businesses grow, people’s living standards have been shrinking,” he says. “Even my workers, who are benefiting, they have concerns about health, security and rents. Will landlords increase rents? If their children are sick, will they have access to medicine?” Iranians have more than four decades of experience of living under varying degrees of sanctions. But the Trump administration has been relentless in its targeting of entities and individuals. China remains Iran’s main export destination, but neighbours Iraq, Turkey and Afghanistan have overtaken the likes of South Korea, India and Japan — all big buyers of the country’s crude oil before the latest sanctions — as importers of Iranian goods. A salesman at an electrical appliance shop explains that his company brings in goods from Asia via an Iraqi middleman, with $500,000 moved in suitcases from Tehran to Baghdad. Prices have increased four times under sanctions, but Iranians “will go without food to buy their phones”, the salesman says. Turkey, which imports Iranian gas, has become a favoured destination for Iranian businessmen to set up offices or locate representatives to continue trading. Iranians established more than 2,000 companies in Turkey in just two years up to 2019. Some are buying $250,000 properties to secure Turkish passports, which can make it easier to do business. “I know lots of people doing that, I want to do it,” says a food trader. “Food, livestock, pharmaceuticals are not sanctioned, but when you cannot use bank transfers, it’s like sanctions.” Recommended Coronavirus Iranians devastated by prospect of new year under quarantine He, like others, uses a third person to help with financial transfers, but it can come with risks — the trader says he lost $200,000 when a middleman simply disappeared with his money. Even if Iranian businessmen find a reliable partner, they face the challenge of financing deals. US sanctions have severed the republic’s links to the global financial system and a shortage of foreign currency at home has exacerbated the situation. Before the outbreak, Tehran had already restricted the allocation of dollars to priority sectors, such as pharmaceuticals and food, and put curbs on the imports of 1,400 goods. A businessman who used to import $20m worth of Chinese water pumps annually is now working on a joint venture with his supplier to start producing them at home as a result of the dollar restrictions. “We provide the land and infrastructure, they provide the parts. We will open the factory in six months,” the businessman says. “A Chinese guy living in Dubai signs for this [JV]. Who he is working with I don’t know.” Brian Hook, the US special representative for Iran, said in a speech in December that the country had about $100bn in foreign reserves, but added that only about 10 per cent of that was “immediately accessible” because of sanctions. He calculated that Iran had lost about $50bn since May 2018 in oil revenue. Iranian analysts and officials say the government has offset some of the losses by increasing other exports, notably petrochemicals, steel and cement. Iran’s Revolutionary Guards, which oversees a sprawling, opaque business empire, has stepped up its activities in some of these areas.  Oil and gas exports accounted for 31 per cent of government revenue and 61 per cent of foreign currency earnings in 2017, but that dipped to 23.5 per cent and 30 per cent respectively last year, Mr Nahavandian says.  An industry executive says Iran exported petrochemicals worth $15bn, including polymers, urea and methanol, and steels products worth $6bn and $8bn in the first 10 months of the financial year. Often the goods are sold at a discount, the executive says, with liquefied petroleum gas more than 10 per cent below the market benchmark. Medical staff distribute information to Iraqi passengers returning from Iran at Najaf International Airport, Iraq, on March 5 © Haidar Hamdani/AFP He adds that Iran’s crude exports are easy for the US to track. But with petrochemicals, which can be stacked into shipping containers, it is much harder. “America cannot control all the sea, 10m containers leave [Iran’s] Bandar Abbas [port] every year, how can they check what’s inside every container?” the executive asks. He adds that the country’s annual petrochemicals production has risen from 55m tonnes five years ago to 66m. Output continues to expand as the shortlived easing of some western sanctions after the nuclear deal provided a window for the republic to procure specialist parts required to complete refineries and chemical plants. That has also helped it produce enough petrol to prevent domestic shortages and export other oil products in the region. However, the US sanctioned Chinese companies, a South African group and five entities based in the United Arab Emirates last week as it sought to thwart trade in Iranian petrochemicals. It is a precarious existence for the government as Tehran manages diminishing resources amid simmering social pressures. At least 300 people were killed in a brutal crackdown after a massive rise in fuel prices triggered mass protests in November. “Nobody is predicting what will happen, it’s very difficult,” the petrochemicals executive says. “Maybe we will be able to survive but what is the cost for the people? For the country?” Additional reporting by Laura Pitel in Ankara

<https://www.offshore-mag.com/business-briefs/company-news/article/14172853/petrobras-joins-fight-against-coronavirus>

<https://www.middleeastmonitor.com/>

<https://www.middleeastmonitor.com/20200325-kuwait-cuts-oil-expenditure-due-to-coronavirus/>

**Kuwait cuts oil expenditure due to coronavirus**

March 25, 2020 at 8:37 pm | Published in: [Coronavirus](https://www.middleeastmonitor.com/category/coronavirus/), [International Organisations](https://www.middleeastmonitor.com/category/region/international-organisations/), [Kuwait](https://www.middleeastmonitor.com/category/region/middle-east/kuwait/), [Middle East](https://www.middleeastmonitor.com/category/region/middle-east/), [News](https://www.middleeastmonitor.com/category/news-2/), [OPEC](https://www.middleeastmonitor.com/category/region/international-organisations/opec/)

Kuwait Petroleum Corporation (KPC) H.Q. [Wikimedia]

March 25, 2020 at 8:37 pm

Yesterday Kuwait announced a government reduction in the country’s energy sector’s operating spending, due to the oil price collapse recently caused by the coronavirus outbreak.

The CEO of the state-run [Kuwait Petroleum Corporation](https://www.middleeastmonitor.com/20200218-kuwait-to-nationalise-entire-energy-sector-by-2021/) (KPC), Hashem Hashem, announced in an official memo that all of KPC’s sectors and other subsidiaries would: “Rationalise spending and review their priorities for the financial year of 2020/2021, while ensuring the safety and continuity of the company’s operations.”

He added that the move would include: “Plans and programs to increase profitability through boosting revenue, reducing operating costs and reviewing required capital spending, through cancelling, postponing or cutting costs for programs and projects.”

The Kuwaiti official noted that the decision was formed by the current circumstances following the outbreak of the coronavirus and the failure of the [Organisation of the Petroleum Exporting](https://www.middleeastmonitor.com/20200301-opec-could-deepen-oil-supply-cuts-with-or-without-russia/) (OPEC) members and Russia, with regard to determining [production shares of crude oil](https://www.middleeastmonitor.com/20200310-what-does-the-plunge-in-oil-prices-mean-for-the-arab-world/).

KPC joins a number of other energy companies around the world who have slashed spending after the benchmark [Brent oil price has more than halved since the start of 2020](https://www.middleeastmonitor.com/20200317-oil-prices-show-sharpest-weekly-decline-since-2008/).A global pact on cutting oil output between OPEC, Russia and other producers – [a group known as OPEC+](https://www.reuters.com/article/us-oil-saudi/despite-opec-deal-collapse-saudi-oil-exports-yet-to-rise-sources-idUSKBN21A321) – was reported earlier this month to have collapsed. Since then, all global production limits were scrapped, prompting Saudi Arabia, the world’s top oil exporter, and the United Arab Emirates to confirm that they would both increase output to record levels.

# Coronavirus part 2: Pandemic sets gold against oil

March 23, 2020 at 4:31 pm | Published in: [Article](https://www.middleeastmonitor.com/category/opinion-pieces/articles-2/), [Asia & Americas](https://www.middleeastmonitor.com/category/region/asia-americas/), [Coronavirus](https://www.middleeastmonitor.com/category/coronavirus/), [Europe & Russia](https://www.middleeastmonitor.com/category/region/europe-russia/), [Opinion](https://www.middleeastmonitor.com/category/opinion-pieces/), [Russia](https://www.middleeastmonitor.com/category/region/europe-russia/russia/), [US](https://www.middleeastmonitor.com/category/region/asia-americas/us/)

Gold Bullion [File photo]



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March 23, 2020 at 4:31 pm

[**Coronavirus part 1: Should Russia really declare an oil price war against the Middle East?**](https://www.middleeastmonitor.com/20200310-should-russia-really-declare-an-oil-price-war-against-the-middle-east/)

Gold prices have risen while that of oil has slumped due to the coronavirus pandemic. The pandemic has taken the lives of over 14,000 people and infected more than 330,000. The death toll in Italy is especially devastating, nearing 6,000.

The value of gold is the highest it’s been in over 5,000 years this week, but this is not a surprise. Due to coronavirus, gold is seen as a safe haven by investors. Therefore, gold’s relative value to copper has surged to its highest in more than a decade and its worth versus silver is the highest on record as the spread of coronavirus hammers metals with industrial applications.

The rapid change in the value of these metals shows the scale of the economic damage investors fear that coronavirus containment measures are causing, putting markets into deep recession.

On the other hand, when we look at black gold – oil – the price of a barrel of oil is lower than $30 and we are witnessing the lowest price of oil per barrel since the Iraqi invasion of Kuwait in 1991. This is mind blowing.

In 2019, experts were saying the demand for oil will increase in 2020. But this pandemic has affected demand. A wise chairman for energy in the Asia Pacific at Wood Mackenzie, an international energy consultancy firm, Gavin Thompson said “2020 has hit us like a fist.”

**READ:**[**Coronavirus proves we need a global response to improve human rights**](https://www.middleeastmonitor.com/20200320-coronavirus-proves-we-need-a-global-response-to-improve-human-rights/)

[](https://www.middleeastmonitor.com/20200323-coronavirus-part-2-pandemic-sets-gold-against-oil/14-9/)

*Oil prices in last 10 years Source: West Texas Intermediate (WTI)*

**Why does the price of oil keep falling?**

Literally, the oil market has been buffeted by three calamities:

**More competition:**From the relentlessly expanding US shale industry to the endless oil wells of the Saudis, oil has never been more plentiful.

**Lack of demand:** Oil prices were ok in 2020 even though there was a rift between Iran and the US after Qassem Soleimani’s assassination. But now, the travel ban and global quarantine have severely exacerbated this. People need toilet paper more than they need oil.

**Oil price war:** When Saudi Arabia, the most influential member of OPEC, decided at its latest meeting in Vienna last week to break its recent strategic oil partnership with Russia and adopt a new policy to maximise production levels, oil prices were at their lowest, the biggest slide since the Gulf War in 1991.

This new policy of the Saudis, which recalibrated global oil markets, gives Saudi Arabia a long-term advantage. This step is very unpopular with most oil exporting countries, international energy companies and American shale producers because collapsing prices will drastically decrease their revenues and, maybe in some cases, push them into bankruptcy.

In addition to this, Saudis can cope with lower prices and can sustain very low prices for a long time as they are producing the cheapest oil in the world at $8.98 per barrel, according to the Saudi oil company [ARAMCO’s report.](https://www.saudiaramco.com/-/media/images/investors/saudi-aramco-prospectus-en.pdf?la=en&hash=8DE2DCD689D6E383BB8F4C393033D8964C9F5585) But, in comparison, US shale oil costs $23.35 per barrel while Russian production costs an average of $19.21 per barrel, according to the Energy Information Administration. Therefore, this price war will hit the US and Russia more than Saudi Arabia.

**READ:**[**Sudan’s coronavirus state of emergency brings mixed blessings**](https://www.middleeastmonitor.com/20200319-sudans-coronavirus-state-of-emergency-brings-mixed-blessings/)

Therefore, it seems that gold, the most actively traded precious metal, is considered one of the safest investments in the world right now.

Both traders and investors are interested in how its price changes and the factors that drive it.

On the other hand, the movement of the US dollar is one of the critical determinants that influence the price of gold. Gold and the dollar have an inverse relationship: when the US dollar weakens, gold prices go up and vice versa. There are two reasons for this behaviour. Because, like other commodities, gold is priced in dollars. A weak dollar makes gold cheaper, which in turn attracts more demand for it.

In reality, gold is traditionally seen as a less risky asset in uncertain times and the first two months of 2020 have shown a resurgence in geopolitical volatility. Stuart Clark, portfolio manager at Quilter Investors, said investors have been seeking asset classes where they can find some protection against global worries.

This virus shows us that uncertainty, fear and emotional decisions are part of everyday life in financial markets, too. Our habits have started to change due to coronavirus. As human beings we are deeply influenced by the herd. Faced with uncertainty our decisions tend to be more emotional.

In my opinion gold prices will fall even more as investors stockpile cash with a rising number of coronavirus-led national lockdowns threatening to overshadow stimulus measures from global central banks to combat economic damage.

The only positive thing of this pandemic when you compare it with the latest similar versions is that COVID-19 is less deadly than the severe acute respiratory syndrome (SARS)**,** as the fatality rate is 3.3 per cent, compared to 9.6 per cent for SARS. But it is important to remember that the biggest economic costs of pandemics come not from the death rate, but from whether people panic or not. Therefore, do yourselves a favour and don’t count how many days you are into quarantine, it is not prison.

**READ:**[**The world is not going back to what it was before the coronavirus outbreak**](https://www.middleeastmonitor.com/20200323-the-world-is-not-going-back-to-what-it-was-before-the-coronavirus-outbreak/)

*The views expressed in this article belong to the author and do not necessarily reflect the editorial policy of Middle East Monitor.*

<https://www.theguardian.com/environment/2020/apr/01/the-fossil-fuel-industry-is-broken-will-a-cleaner-climate-be-the-result>

Will the coronavirus kill the oil industry and help save the climate?

[**Oil**](https://www.theguardian.com/environment/oil)

**Analysts say the coronavirus and a savage price war means the oil and gas sector will never be the same again**

[**Damian Carrington**](https://www.theguardian.com/profile/damiancarrington)*,*[**Jillian Ambrose**](https://www.theguardian.com/profile/jillian-ambrose)*and*[**Matthew Taylor**](https://www.theguardian.com/profile/matthewtaylor)

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[[](https://www.theguardian.com/environment/2020/apr/01/the-fossil-fuel-industry-is-broken-will-a-cleaner-climate-be-the-result#img-1)](https://www.theguardian.com/environment/2020/apr/01/the-fossil-fuel-industry-is-broken-will-a-cleaner-climate-be-the-result" \l "img-1)

 A flame from a Saudi Aramco oil installation in the desert near the oil-rich area of Khouris, 2008. Photograph: Marwan Naamani/AFP/Getty Images

The plunging demand for oil wrought by the coronavirus pandemic combined with a savage price war has left the fossil fuel industry [broken](https://www.bloomberg.com/news/articles/2020-03-29/the-global-oil-market-is-broken-drowning-in-crude-nobody-needs) and in survival mode, according to analysts. It faces the gravest challenge in its 100-year history, they say, one that will permanently alter the industry. With some calling the scene a “[hellscape](https://www.ft.com/content/7afb4c04-6d58-11ea-89df-41bea055720b)”, the least lurid description is “[unprecedented](https://www.iea.org/articles/energy-market-turmoil-deepens-challenges-for-many-major-oil-and-gas-exporters?utm_campaign=IEA%20newsletters&utm_source=SendGrid&utm_medium=Email)”.

A key question is whether this will permanently alter the course of the climate crisis. Many experts think it might well do so, pulling forward the date at which demand for oil and gas peaks, never to recover, and allowing the atmosphere to gradually heal.

The boldest say peak fossil fuel demand may have been dragged into the here and now, and that 2019 will go down in history as the peak year for carbon emissions. But some take an opposing view: the fossil fuel industry will bounce back as it always has, and bargain basement oil prices will slow the much-needed transition to green energy.

Who is right depends on a heady mix of geopolitics, profit, investor sentiment, government bailouts and net zero emissions targets, campaigner pressures and, not least, consumer behaviour – is virtual working, for instance, the new normal?



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What is beyond doubt is the carnage in the sector. The lowest oil prices for almost two decades, with worse potentially on the way. Some oil major stock market valuations halved since January. At least two-thirds of annual investment – $130bn – dumped and tens of thousands of job losses. In a few markets prices have gone negative – sellers will pay you to take the oil, as [global storage capacity fills](https://www.theguardian.com/business/2020/mar/25/oil-price-may-fall-to-10-a-barrel-as-world-runs-out-of-storage-space).

“The price war and Covid-19 have really thrown the oil and gas sector into turmoil, and now we have companies really in survival mode,” said Valentina Kretzschmar, director of corporate research at analysts Wood Mackenzie.

[Oil](https://www.theguardian.com/business/oil) wells responsible for almost 1m barrels a day may have already been shut down because the price of oil is now lower than the cost of shipping it, according to US banking giant Goldman Sachs, with the number of wells growing “by the hour”. This is likely to “permanently alter the energy industry and its geopolitics” and “shift the debate around climate change”, said Jeffrey Currie, head of commodities at the bank.

Demand for oil has plummeted as the coronavirus locks down people in their homes and airplanes on runways. “The virus will bring forward peak demand for fossil fuels,” said Kingsmill Bond, at analysts Carbon Tracker. This latest cyclical oil shock is hitting an industry already heading towards a structural peak created by nations committing to net zero future emissions, he said.

“As for the impact of the virus on the timing [of peak demand], it depends of course on the severity,” he said. In 2018, Carbon Tracker estimated [peak demand would come in 2023](https://carbontracker.org/reports/2020-vision-why-you-should-see-the-fossil-fuel-peak-coming/) but Bond said it was possible that the crisis has advanced this by three years. “That means that peak emissions was almost certainly 2019, and perhaps peak fossil fuels as well,” he said. “It will be touch and go if there can be another mini-peak in 2022, before the inexorable decline begins.”

While the oil companies themselves have long argued peak demand is too far off to put a number on, most observers thought it would happen this decade. Mark Lewis, head of climate change investment research at BNP Paribas, agreed the crises could bring it closer.

“When the dust settles, the peak demand narrative will be there stronger than ever,” he said. “This is particularly true if long-haul aviation fails to recover. This has been a very strong source of oil demand growth in recent years but the longer we are at home – remote working, using video conferencing – the more people will wonder: do we really need to get on a plane?”

**End of an era?**

[[](https://www.theguardian.com/environment/2020/apr/01/the-fossil-fuel-industry-is-broken-will-a-cleaner-climate-be-the-result#img-2)](https://www.theguardian.com/environment/2020/apr/01/the-fossil-fuel-industry-is-broken-will-a-cleaner-climate-be-the-result" \l "img-2)

 The price of petrol displayed at a fraction of a penny under £1/litre at Costo’s filling station in Birmingham. Photograph: Morgan Harlow/PA

The oil price plunge has also demolished the lucrative returns on exploration projects to which investors have become accustomed. This threatens what Lewis calls the “golden dividend era” of the last two decades, which has made oil stocks mainstays of portfolios.

Wood Mackenzie last week analysed the impact of an oil price of $35 on companies’ previous investment plans for 2020. “It’s a very, very ugly picture,” said Kretzschmar. “At $35 per barrel, 75% of projects don’t even cover the cost of capital.”

Most strikingly, the fat rates of return projected for the oil and gas projects have slumped from about 20% down to 6%, she said. “They’re very much in line now with what you can get from solar and wind projects.”

“The oil and gas sector is already a very much unloved sector by investors and in this kind of oil price environment, it becomes low return, high risk and high carbon,” Kretzschmar said. “It is not a very attractive proposition.” With oil prices predicted by some to collapse even further, Kretzschmar is blunt: “At $20 [the industry] will be decimated.”

The oil industry was already under pressure from investors concerned about the climate crisis and increasing regulation from governments to cut emissions. Colin Melvin, at Arkadiko Partners, a consultancy advising some of the world’s biggest investment management and pension funds, said that after the crisis he expects investment to flow increasingly towards companies perceived to offer wider social benefits.

“The purpose of the investment of capital in business is to create wellbeing, to create wealth in the true sense, and I think that is going to become more and more relevant to investors,” he said.

Adam Matthews, director of ethics and engagement at the Church of England pensions board, said the implications for the oil and gas sector could be significant. “[Demand reduction] could be the catalyst for rapid change and I think investors are going to look at long term systemic challenges very closely and want to see much greater resilience.”

As well as climate concerns, the wild instability of the oil markets provoked by the crises may also deter investors, according to [analysis from the University of Oxford’s Institute for Energy Studies](https://www.oxfordenergy.org/wpcms/wp-content/uploads/2020/03/OEF121.pdf?v=79cba1185463): “This is a market that is being tested to its limits.”

However, not all experts think the oil industry’s loss is necessarily a gain for green energy and the climate. “If anything it may hold up the share of oil for longer, because it’s cheaper. It could be bad news from a climate point of view,” said Dieter Helm, professor of energy policy at the University of Oxford.

He said securing a green economic recovery from the coronavirus crisis will require deliberate policy measures from governments: “This is where the carbon tax comes in. Now is the moment.”

**‘Historic opportunity’**

Governments are deploying stupendous sums to stimulate the coronavirus-wracked global economy - [$5 trillion from the G20 nations alone](https://climatechangenews.us1.list-manage.com/track/click?u=6316d25f7b68919349e54a251&id=4b0919bcf0&e=83eed4ed89) - but how it is disbursed remains uncertain. European Union leaders have promised to make their emergency measures [align with their Green Deal](https://www.bloomberg.com/news/articles/2020-03-26/green-focus-likely-for-european-union-s-virus-recovery-plan?utm_campaign=Carbon%20Brief%20Daily%20Briefing&utm_medium=email&utm_source=Revue%20newsletter) programme and Fatih Birol, executive director at the International Energy Agency, has said there is an “[historic opportunity](https://www.iea.org/commentaries/put-clean-energy-at-the-heart-of-stimulus-plans-to-counter-the-coronavirus-crisis)” to pour investment into energy technologies that cut greenhouse gas emissions.

But the [$2tn US coronavirus relief package](https://www.theguardian.com/us-news/2020/mar/26/us-coronavirus-relief-package-airlines-fossil-fuel-companies-climate) is doling out $60bn to struggling airlines and offering low-interest loans that are available to fossil fuel companies, without requiring any action to stem the climate emergency. The Canadian government has said it will give loans to its oil companies, who say they are on “[life support](https://uk.reuters.com/article/us-health-coronavirus-canada-oil/canadian-oil-companies-ask-government-for-cash-credit-to-survive-idUKKBN21C3HD?utm_campaign=Carbon%20Brief%20Daily%20Briefing&utm_medium=email&utm_source=Revue%20newsletter)”.

[[](https://www.theguardian.com/environment/2020/apr/01/the-fossil-fuel-industry-is-broken-will-a-cleaner-climate-be-the-result#img-3)](https://www.theguardian.com/environment/2020/apr/01/the-fossil-fuel-industry-is-broken-will-a-cleaner-climate-be-the-result" \l "img-3)

 Aerial view of the Noor 3 solar power station which is nearing completion, near Ouarzazate, southern Morocco in 2017. Photograph: Abdeljalil Bounhar/AP

After the 2008 global financial crisis, there were high hopes that the trillions of dollars delivered at that time would green the economy, but fossil fuels and their emissions powered on, ever upwards. Bond said: “The big difference to 2008 is that the cost of renewables is now below that of fossil fuels. There is no point trying to sustain the unsustainable high-cost fossil assets in any event. It would be deeply ironic for [neoliberal] advocates of Ayn Rand to ask for a government bailout.”

Adrienne Buller, an economist at the Common Wealth thinktank, said governments in countries like the UK, US and Canada should now consider nationalising major oil corporations.

“Fossil fuel companies won’t be allowed to fail en masse.

Any bailout should at a bare minimum come with equivalent public stakes in the companies, and strong conditions for environmental and climate protections and a transition away from fossil fuel production.

“However, given the intent of acquiring this stake should be to wind down production as rapidly as feasible while ensuring a just transition for workers and security of energy supply, nationalisation may be more appropriate and pragmatic.”

The global industry trade body, the International Association of [Oil](https://www.theguardian.com/environment/oil) and Gas Producers, insists its members have a vital role after the pandemic. “Oil and gas play a significant role in the global energy mix and will do so in the future,” said a spokesman. “It is too early to predict what the midterm impact will be. But the oil and gas industry has a history of successfully responding to difficult situations and we anticipate that it will adapt as it has before.”

“Furthermore, the industry has been a key engine of prosperity and a driver of innovation for many decades,” he said. “It has the experience, skills, knowledge and resources needed to realise a low-emissions energy future - a transition that would be more difficult and more expensive without it.”

**‘Saudi Arabia is desparate to cash out’**

Adding fuel to the fire of the pandemic is the price war being waged by Saudi Arabia and Russia, who increased production just as the pandemic slashed demand, sending prices towards the floor. The moves are seen as an attempt to grab market share by killing the higher cost producers behind the US shale boom.

[[](https://www.theguardian.com/environment/2020/apr/01/the-fossil-fuel-industry-is-broken-will-a-cleaner-climate-be-the-result#img-4)](https://www.theguardian.com/environment/2020/apr/01/the-fossil-fuel-industry-is-broken-will-a-cleaner-climate-be-the-result" \l "img-4)

 Saudi Arabia’s crown prince, Mohammed Bin Salman Photograph: Brendan Smialowski/AFP via Getty Images

Prof Bernard Haykel, at Princeton University, US, said it also reflects a [more fundamental strategic shift](http://haykel/) led by Saudi Arabia’s crown prince, Mohammed bin Salman: “With a global clean-energy transition inevitable, he is desperate to cash out while the Kingdom still can.”

The lasting impact of the price war depends on how long Saudi Arabia and Russia can keep pumping cheap oil. While their production costs are very low, they depend on high revenues to balance their national budgets.

[Michael Liebreich, at Bloomberg New Energy Finance](https://about.bnef.com/blog/covid-19-the-low-carbon-crisis/), said the fiscal break-even for Saudi Arabia is around $80 per barrel, meaning its foreign exchange reserves might sustain rock-bottom oil prices for only two or three years. “Russia, with a $40 a barrel fiscal break-even and much more diversified economy, can survive low oil prices for a decade,” he said.

Whatever happens, the industry will never be the same again after the double whammy of the pandemic and price war. “The companies that emerge from the crisis will not be the ones that went into it,” said Carbon Tracker’s Bond. “We will see write-downs, restructuring and radical change.”

Experts, including Currie at Goldman Sachs, say the climate change debate will almost certainly take a difference course after the crisis. But exactly what that looks like remains to be seen. “The question is how long this is all going to last, and no one really knows,” said Kretzschmar.

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**Update: Brent Oil Rises above $32 on Hopes of Output Deal**

**Shadia Nasralla***April 3, 2020*

Illustration by namning AdobeStock


*Illustration by namning AdobeStock*

Benchmark Brent crude oil futures rose as high as $33.05 a barrel on Friday on rising hopes of a new global deal to cut global crude supply.

Brent crude futures were up 9.3%, or $2.79, at $32.73 a barrel by 1014 GMT. Brent soared as much as 47% on Thursday for its highest intraday percentage gain on record. It closed 21% up, still about half the $66 at which it was trading at the end of 2019.

U.S. West Texas Intermediate (WTI) crude also moved back into positive territory, rising 4.8%, or $1.22, to $26.54 a barrel after advancing by 24.7% on Thursday.

U.S. President Donald Trump on Thursday said that he had brokered a deal that could result in Russia and Saudi Arabia cutting output by 10 million to 15 million barrels per day (bpd), representing 10-15% of global supply. Trump said he had not offered to cut U.S. output.

The OPEC+ oil exporter group is debating cutting global supply by 10 million bpd, an OPEC source said on Friday, adding that any further cuts must include producers from outside the alliance.

Russia and Saudi Arabia both belong to the grouping of members of the Organization of the Petroleum Exporting Countries and its allies, but the United States does not.

Oil prices slumped 65% in the first quarter on a demand slump caused by the global coronavirus outbreak and moves by Russia and Saudi Arabia to flood the market after the failure last month to extend a previous supply pact.

The energy ministry of non-OPEC producer Azerbaijan, meanwhile, said an OPEC+ meeting is planned for April 6 and will be held as a video conference, Russia's RIA news agency reported.

"There does appear to finally be collective acceptance that the market is in such an extraordinary state of oversupply that coordinated action is needed," said Callum Macpherson, Investec’s head of commodities.

"For now, the possibility of 'something' happening could make short sellers more wary and help to limit downward pressure on oil prices, but there may need to be more tangible signs of progress fairly soon if a retest of recent lows is to be avoided."

Saudi could drop production down to about 8.5 million bpd but is likely to be reluctant to go below that because of the desire to maintain associated gas production. Russia, meanwhile, is likely to look for some measure of sanctions relief from Washington, said Helima Croft, global head of commodity strategy at RBC Capital Markets.

The Canadian province of Alberta, home to the world's third-largest oil reserves, is open to joining any potential global pact to reduce a glut of crude, Premier Jason Kenney said.

Citi analysts forecast a decline in global oil demand of 18-20 million bpd in the second quarter, which could result in the collapse of 2 million bpd of refinery runs, triggering unprecedented 1 billion barrel growth in inventories over two months.

(Additional reporting by Shu Zhang and Sonali Paul; Editing by Kirsten Donovan and David Goodman)

<https://www.oilandgas360.com/exxonmobil-reduces-2020-capex-by-30-cash-opex-by-15-maintains-long-term-outlook/>

[ExxonMobil reduces 2020 Capex by 30%, Cash Opex by 15%; maintains long-term outlook](https://www.oilandgas360.com/exxonmobil-reduces-2020-capex-by-30-cash-opex-by-15-maintains-long-term-outlook/)

in [360 Company Releases](https://www.oilandgas360.com/360-company-releases/) / [Closing Bell Story‎](https://www.oilandgas360.com/closing-bel%e2%80%8al-story%e2%80%8e/) / [Energy News](https://www.oilandgas360.com/energy_feed/) / [Exploration and Production (E&P)](https://www.oilandgas360.com/ep/) / [Press Releases](https://www.oilandgas360.com/press/) / [Uncategorized](https://www.oilandgas360.com/uncategorized/)   by— [Oil & Gas 360](https://www.oilandgas360.com/author/enercom/)

360 Feed Wire

IRVING, Texas–([**BUSINESS WIRE**](http://www.businesswire.com/))–[**ExxonMobil**](https://cts.businesswire.com/ct/CT?id=smartlink&url=http%3A%2F%2Fwww.exxonmobil.com%2FCorporate%2Fdefault.aspx&esheet=52200131&newsitemid=20200407005266&lan=en-US&anchor=ExxonMobil&index=1&md5=93830cc1b67e6e4f12d8f8efe9fb4191) said today it is reducing its 2020 capital spending by 30 percent and lowering cash operating expenses by 15 percent in response to low commodity prices resulting from oversupply and demand weakness from the COVID-19 pandemic.

Capital investments for 2020 are now expected to be about $23 billion, down from the previously announced $33 billion. The 15 percent decrease in cash operating expenses is driven by deliberate actions to increase efficiencies and reduce costs, and includes expected lower energy costs.

“After a thorough evaluation of the impacts of the pandemic and market conditions, we have worked closely with business partners to plan and execute capital adjustments that preserve long-term value, maximize cost efficiency, and put us in the strongest position when market conditions improve,” said Darren Woods, chairman and chief executive officer of Exxon Mobil Corporation.

“The long-term fundamentals that underpin the company’s business plans have not changed — population and energy demand will grow, and the economy will rebound. Our capital allocation priorities also remain unchanged. Our objective is to continue investing in industry-advantaged projects to create value, preserve cash for the dividend and make appropriate and prudent use of our balance sheet.”

ExxonMobil continues to monitor market developments and can exercise additional reduction options if required. As market conditions evolve, the company will continue evaluating the impacts of decreased demand on its 2020 production levels as well as longer-term production impacts.

The largest share of the capital spending reduction will be in the Permian Basin, where short-cycle investments can be more readily adjusted to respond to market conditions, while preserving value over the long term. Reduced activity will affect the pace of drilling and well completions until market conditions improve. Importantly, the reductions will not compromise the scale, functional excellence and cube development advantages that are maximizing resource recovery and value in the Permian.

**[](https://www.oilandgas360.com/exxon-mobils-profit-tumbled-30-in-2019-5-in-final-quarter/)**

[**Exxon Mobil's profit tumbled 30% in 2019, 5% in final quarter**](https://www.oilandgas360.com/exxon-mobils-profit-tumbled-30-in-2019-5-in-final-quarter/)

**[](https://www.oilandgas360.com/exxon-guyana-head-toward-uncertain-future/)**

[**Exxon, Guyana head toward uncertain future**](https://www.oilandgas360.com/exxon-guyana-head-toward-uncertain-future/)

**[](https://www.oilandgas360.com/exxon-mobil-hess-announce-13th-guyana-discovery/)**

[**Exxon Mobil, Hess announce 13th Guyana discovery**](https://www.oilandgas360.com/exxon-mobil-hess-announce-13th-guyana-discovery/)

**[](https://www.oilandgas360.com/all-eyes-on-exxon-chevron-after-bp-vows-carbon-neutrality/)**

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[**Exxon drops to 15-year low ahead of annual strategy presentation**](https://www.oilandgas360.com/exxon-drops-to-15-year-low-ahead-of-annual-strategy-presentation/)

**[](https://www.oilandgas360.com/exxon-may-crush-bailout-hopes-for-suffering-fracking-companies/)**

[**Exxon May Crush Bailout Hopes for Suffering Fracking Companies**](https://www.oilandgas360.com/exxon-may-crush-bailout-hopes-for-suffering-fracking-companies/)

Developing the numerous world-class deepwater discoveries offshore Guyana remains an integral part of ExxonMobil’s long-term growth plans. Current operations onboard the Liza Destiny production vessel are unaffected, and startup of the second phase of field development remains on target for 2022, with the Liza Unity production vessel currently under construction. As the company waits for government approval to proceed with a third production vessel for the Payara development, some 2020 activities are now being deferred, creating a potential delay in production startup of six to 12 months.

A final investment decision for the Rovuma liquefied natural gas (LNG) project in Mozambique, expected later this year, has been delayed. ExxonMobil continues to actively work with its partners and the government to optimize development plans by improving synergies and exploring opportunities related to the current lower-cost environment. The Coral LNG development continues as planned.

Globally, ExxonMobil anticipates industry refinery output will decline in line with demand and available storage, and it will maintain the ability to return to normal operations as demand recovers. Timing of expansion plans for select downstream and chemical facilities across the company’s portfolio will be adjusted to capture efficiencies, slow spending pace and better align with a return in commodity demand.

Despite the reductions, ExxonMobil expects to meet its projected investment of $20 billion on U.S. Gulf Coast manufacturing facilities made in its 2017 Growing the Gulf initiative. The company also expects to reach its proposed U.S. investment of $50 billion over five years announced in 2018.

“While COVID-19 has had a significant impact on the global economy, we are confident that trade, transportation and manufacturing will recover,” said Woods. “ExxonMobil continues to invest in the projects that will position us to support economic recovery and capture value for our shareholders.”

To minimize risks presented by COVID-19 and maintain operations, ExxonMobil has implemented enhanced cleaning procedures and modified work practices at sites around the world.

The company is maximizing production of products critical to the global response, including isopropyl alcohol, which is used to manufacture hand sanitizer, and polypropylene, which is used to make protective masks, gowns and wipes. ExxonMobil is also supporting efforts to redesign and accelerate production of reusable face masks and shields to help alleviate the shortage for medical workers and first responders.

“I’m proud of our company’s response efforts,” said Woods. “On our offshore platforms, in our refineries, at our lubes and chemical plants and throughout our facilities worldwide, our people are getting the job done and meeting the world’s needs for our products while protecting themselves and others. I commend our organization for their continued focus during these difficult circumstances.”

**About ExxonMobil**

ExxonMobil, one of the largest publicly traded international energy companies, uses technology and innovation to help meet the world’s growing energy needs. ExxonMobil holds an industry-leading inventory of resources, is one of the largest refiners and marketers of petroleum products, and its chemical company is one of the largest in the world. To learn more, visit [**exxonmobil.com**](https://cts.businesswire.com/ct/CT?id=smartlink&url=http%3A%2F%2Fwww.exxonmobil.com%2F&esheet=52200131&newsitemid=20200407005266&lan=en-US&anchor=exxonmobil.com&index=2&md5=6bf3a4030f04fb3f7d2e441a31d5f57e) and the [**Energy Factor**](https://cts.businesswire.com/ct/CT?id=smartlink&url=https%3A%2F%2Fenergyfactor.exxonmobil.com%2F&esheet=52200131&newsitemid=20200407005266&lan=en-US&anchor=Energy+Factor&index=3&md5=71d06d5c2b68687c2355eaf3cd18f373).

Follow us on [**Twitter**](https://cts.businesswire.com/ct/CT?id=smartlink&url=https%3A%2F%2Ftwitter.com%2Fexxonmobil&esheet=52200131&newsitemid=20200407005266&lan=en-US&anchor=Twitter&index=4&md5=10933bc323e5214f00da89ab65657503) and [**LinkedIn**](https://cts.businesswire.com/ct/CT?id=smartlink&url=https%3A%2F%2Fwww.linkedin.com%2Fcompany%2Fexxonmobil%2F&esheet=52200131&newsitemid=20200407005266&lan=en-US&anchor=LinkedIn&index=5&md5=529c3d3457da074a08dee5c96c63a772).

CAUTIONARY STATEMENT

Statements of future events or conditions in this release are forward-looking statements. Actual future results, including capital and operating expense reductions; project plans, timing, and outcomes; resource recoveries and production rates and timing; future business results including cash flows, dividends, and shareholder returns; accounting effects resulting from market developments and ExxonMobil’s responsive actions; and impacts of the COVID-19 pandemic on ExxonMobil’s business, and results, could differ significantly depending on a number of factors including supply and demand for oil, gas, and petroleum products and other market factors affecting oil, gas, and petroleum product prices; the outcome of government policies and actions, including actions taken to address COVID-19 and to maintain the functioning of national and global economies and markets; the ultimate impact of COVID-19 on people and economies; the impact of company actions to protect the health and safety of employees, vendors, customers, and communities; actions of competitors and commercial counterparties; the ability to access short- and long-term debt markets on a timely and affordable basis; the actions of consumers; the timely completion of development projects; other legal and political factors including obtaining necessary permits and changes in tax or environmental laws; unexpected operating events or technical difficulties; the outcome of commercial negotiations including negotiations with governments, private partners, and vendors; and other factors discussed under Item 1A Risk Factors in ExxonMobil’s most recent annual report on Form 10-K and set forth under the heading “Factors Affecting Future Results” on the Investors page of our website at exxonmobil.com. Statements regarding potential future financial or operating results made at the Corporation’s March 5, 2020 Investor Day should not be considered to be updated or re-affirmed as of any later date except to the extent specifically updated or re-affirmed in this release or in subsequent public disclosures. References to oil-equivalent barrels and other quantities of oil and gas in this release include amounts that are not yet classified as proved reserves under U.S. SEC regulations but which are expected ultimately to be recovered. References to projects in this release may refer to a variety of activities and are not intended to correspond to the term as used on in any government payment transparency reports.

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Guyana's Oil Output Rises 58%

[](https://www.worldenergyreports.com/images/orig/104604) Liza Destiny FPSO currently the only offshore production facility in Guyana (Photo: Guyana Department of Public Information)

Guyana's oil output rose 58.2% to 56,320 barrels per day (bpd) in January, up from 35,607 bpd in December, the South American country's finance ministry said in a report published this week.

The government is still working with the consortium producing crude at the Stabroek block off its coast on finalizing the procedures to calculate export prices for the crude, the Thursday report said.

The consortium, which is led by Exxon Mobil Corp and includes Hess Corp and China's CNOOC Ltd, has discovered more than 8 billion barrels of oil off the coast of Guyana, a poor country with no history of oil production. Output at the block began in December, and exports began in January.

Exxon has said the recent plunge in crude oil prices, due to a price war between the world's oil powerhouses and fast-declining crude demand, has had no impact so far on the Stabroek block's flagship Liza project, but that the company would make adjustments as necessary.

Based on a draft of the pricing procedures, the ministry said the government would receive a $1.3 million royalty payment corresponding to January.

Production at Liza is expected to reach some 120,000 bpd in its first phase.

(Reporting by Luc Cohen Editing by Chizu Nomiyama and Paul Simao)

Energean Power FPSO Hull Leaves China

[](https://www.worldenergyreports.com/images/orig/111620) Energean Power FPSO Hull leaving China - Credit: Energean Oil and Gas

Mediterranean Sea-focused oil and gas company Energean Oil and Gas has informed that its Energean Power FPSO Hull sailed away from the COSCO yard in China on Friday, April 3, 2020.

The hull will now be towed to the Sembcorp Marine Admiralty Yard in Singapore, where the topsides will be integrated before the completed FPSO is towed to the Karish field in Israel for installation and hook-up. The offshore gas field sits at a water depth of 1,750 meters.

"The sail away of the hull from China represents the achievement of a key milestone in the Karish project timetable," Energean said.

According to Energean, the first gas on the Karish project is on track for H1 2021.

Energean has previously said that the completed FPSO is expected to sail away from Singapore [towards Israel at the 2020 year-end.](https://www.oedigital.com/news/476801-energean-power-fpso-hull-to-sail-away-in-coming-weeks)

So far, Energean has secured firm gas sales from the Karish development of 5.0 bcm/yr with a further 0.6 bcm/yr to be converted to a firm basis immediately on publication of a satisfactory Karish North CPR, expected at the end of March 2020.

Petrobras to Double Oil Output Cuts Amid "Worst Oil Industry Crisis in 100 Years."

[](https://www.worldenergyreports.com/images/orig/111570) Image by Andre Motta De Souza / AGÊNCIA PETROBRAS

Brazil's Petrobras will double its oil output cuts to 200,000 barrels per day, or about 6% of total production, and shorten work hours as the state-controlled company responds to what its chief executive has called the "worst oil industry crisis in 100 years."

Petroleo Brasileiro SA, as the company is formally known, said in a filing that it is also deferring the payment of 10% to 30% of the salaries of managers and cutting work hours to six from eight hours per day for 21,000 employees, among other cost-saving measures.

Crude oil prices have crashed by around 60% year to date as Saudi Arabia and Russia battle for their share of a market that has also been battered by the coronavirus pandemic.

Last week, Petrobras announced a production cut of 100,000 bpd, reduced capital expenditure plans and postponed dividend payments in response to flagging crude prices.

At the time, the company said it would cut production in part by idling shallow-water fields. In the Wednesday announcement, Petrobras did not say where the additional production cuts would be concentrated, noting only that it would depend on "operational and market conditions."

Petrobras is among several major oil companies that are throttling back investments, operational expenditures and in some cases production as crude prices fall below the breakeven price of some fields.

Among the companies that have cut production is Chevron Corp, which slashed its 2020 production forecast in the Permian Basin by 20%. Joint ventures between the U.S. company and Venezuela's state-run PDVSA have canceled service contracts and procurement processes in recent weeks.

On Wednesday, Petrobras also said it would reduce its refineries' production but did not specify by how much, as lockdowns in Brazil's largest cities curb demand.

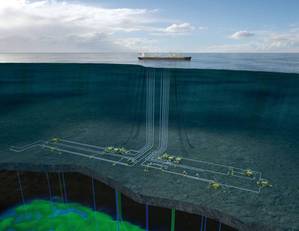
Petrobras and its subsidiaries are also cutting costs, the filing said. Its Transpetro midstream subsidiary expects to reduce or postpone payments totaling 507 million reais ($97 million).

Brazil-listed preferred shares in Petrobras were off 3.7% after opening on Wednesday, while the nation's benchmark Bovespa equities index was down 4.6%.

($1 = 5.24 reais)

(Reporting by Ana Mano and Tatiana Bautzer; editing by Jason Neely and Steve Orlofsky)

Aker Energy Delays Ghana Offshore Project 'Indefinitely'

[](https://www.worldenergyreports.com/images/orig/111554) Pecan development illustration - Image: Aker Energy

Ghana's President Nana Akufo-Addo in February said he expected Norwegian oil firm Aker Energy to make a final investment decision on the Pecan offshore development "within a month or two." The wait is now set to be prolonged "indefinitely."

Namely, in the space of one month or so, the world has turned on its head with the global coronavirus outbreak, and the overflow of cheap oil from Saudi Arabia, leading to a historic crash in oil prices.

This, in turn, has now led the Norwegian oil firm to delay its plans to sanction the Pecan offshore oil project in Ghana.

Aker Energy's parent company Aker ASA, said in its annual report on Wednesday that given the unprecedented collapse in oil prices in the first quarter of 2020, Aker Energy "has decided to postpone the Pecan project indefinitely."

"At the top of Aker's ownership agenda is to find potential for improvement, including for the technical solution, as well as supporting Aker Energy's strategy of exploring opportunities for transactions. Aker Energy has a constructive dialogue with the authorities in Ghana, and have a shared understanding of the challenges being faced," Aker Energy said.

CNRI Files Removal Plan for Two North Sea Floaters

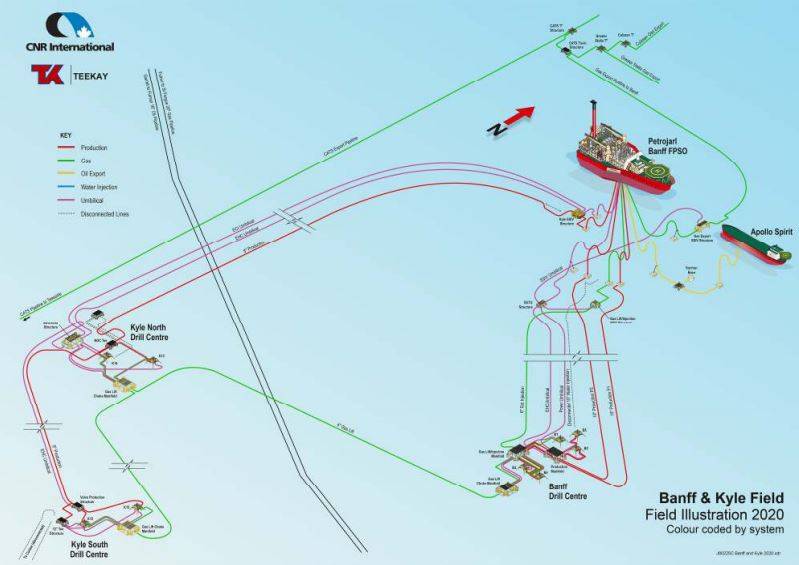
[](https://www.worldenergyreports.com/images/orig/111494)Petrojarl Banff FPSO - Image by Lars Ove Gunhildsoien - MarineTraffic

CNR International (CNRI) has filed plans for the removal of the Petrojarl Banff FPSO and the Apollo Spirit FSO, from its Banff and Kyle fields in the North Sea. Apart from the two floaters, CNRI will also remove the associated risers and mooring systems.

"As production rates from both fields decline, continued production from both fields will become uneconomical during 2020. The field partners have investigated various alternative production strategies to further extend the life of the Banff and Kyle fields, but no viable alternative to  
decommissioning has been identified," CNRI said.

The Petrojarl Banff FPSO and Apollo Spirit FSO will be used for the initial decommissioning activities, namely the flushing/deoiling of the subsea infrastructure i.e. manifolds, risers, subsea pipelines and umbilicals, and to support with the implementation of isolations for the subsea wells.

The FPSO and FSO will then not be required to perform any further decommissioning related activities and it is proposed that the vessels are removed from their current locations, CNRI plan reads.

Credit: CNRI

The Banff and Kyle fields are located in the UK Sector of the Central North Sea some 200 kilometers east of Aberdeen in approximately 90 meters - 95 meters water depth. The Banff and Kyle fields are tied back to the Petrojarl Banff turret-moored FPSO. The Apollo Spirit is an FSO vessel, which is moored via a Submerged Turret Loading (STL) system, and it receives processed oil from the Petrojarl Banff via a 12” flexible riser.

Oil is stored in the vessel’s cargo tanks and periodically offloaded to shuttle tankers. The Apollo Spirit has nine cargo tanks, with a total capacity of 910,000 bbl.

A Cessation of Production application for the field was submitted to the Oil and Gas Authority (OGA), with approval granted on 2rd March 2020.

The Petrojarl Banff FPSO operates under a Lease and Operate Contract between CNRI and Teekay.

CNRI has said that after completion of operations at the Banff and Kyle fields, the FPSO unit is to be redeployed or sold. In the event that no viable redeployment or sale opportunities are available, the vessel may be sent for recycling, CNRI said.

Also, the Apollo Spirit FSO operates under a Lease and Operate Contract between Teekay and Ugland Stena Storage (USS). Similarly to the FPSO plan, the FSO unit is to be redeployed or sold, and if no redeployment option is found, it may be scrapped.



Brazil: FPSO Charter Ends 5 Years after Deadly Explosion

[](https://www.worldenergyreports.com/images/orig/111454) Cidade de Sao Mateus - Image by Mario Burns - MarineTraffic

FPSO leasing company BW Offshore has informed that a charter for FPSO Cidade de Sao Mateus has expired.

The FPSO was involved in an explosion in February 2015, an incident in which nine workers were killed, and 26 others injured.

There were 74 people aboard the FPSO at the time of the incident which happened after an explosion in the pump room, which caused significant damage to the FPSO itself, too.

The unit at the time operated for at Petrobras' Camarupim and Camarupim Norte fields in Espirito Santo 120 km from the coast.

According to a report by the Brazilian Navy after the incident, the explosion caused severe structural damage at the aft section, it affected living  
quarters, engine room, pump room and structural fittings and equipment located in those quarters.

While there have been scenarios were the FPSO would be repaired and eventually return to production at Petrobras' offshore oil fields, this never happened.

In a statement on Monday, March 30, 2020, BW Offshore, the owner of the FPSO said: "BW Offshore informs that the charter agreement and the services agreement for the FPSO Cidade de Sāo Mateus, which was operating on the Camarupim field offshore Brazil from 2009 until 2015, reached their final terms on March 29, 2020."  
  
The FPSO is currently in lay-up in Singapore.

Yinson, Petrobras Sign Firm Contracts for Marlim 2 FPSO

[](https://www.worldenergyreports.com/images/orig/111443) Illustration only; An FPSO in Brazil - Image by Ranimiro - AdobeStock

Malaysian FPSO provider Yinson has signed firm contracts with Petrobras for the delivery and for operation and maintenance of the Marlim 2 FPSO.

The two companies had in October 2019 signed letters of intent for the long-term charter and operation of the FPSO to be deployed at Petrobras’ Marlim field in the Campos Basin.

Yinson has, a couple of days ago, confirmed that its subsidiaries Yinson Production Pte Ltd, Yinson Boronia Production B.V., and Yinson Boronia Serviços de Operação Ltda, on March 23, 2020, entered into the definitive contracts Petrobras for the Marlim 2, under the same terms as stipulated by the letters of intent signed in October 2019.

The date of final acceptance of the FPSO under the contracts is expected in the first quarter of 2023.

"Marlim 2 FPSO is expected to commence operation by the first quarter of 2023 upon achieving final acceptance," Yinson said, adding there was no extension of the term of the charter under the contracts.

As announced in October 2019, the term of the charter is 9,125 days or approximately 25 years from the date of final acceptance of Marlim 2 FPSO.

The estimated aggregate value of the contracts – both for delivery and operations and maintenance - is around $5.4 billion

The FPSO will be installed around 150 km off the Brazilian coast, in a water depth of around 930 meters. The Marlim 2 FPSO will have the capacity to process up 70,000 bpd of oil and 4 million m³/ of natural gas. This will be Yinson's first FPSO in Brazil.

In the wake of the recent crash in oil price and coronavirus challenges, Yinson said its management was cautiously confident in the group's ability to stay resilient through the challenges, "reflected in part by our successful bid in Brazil for the FPSO Marlim 2 project, letter of intent recently secured for the provision of an [FPSO in Ghana [with Aker Energy]](https://www.oedigital.com/news/475884-aker-energy-yinson-sign-pecan-fpso-loi)and the recent [successful deployment of FPSO Helang](https://www.oedigital.com/news/474018-layang-field-starts-oil-production), together with other potential upcoming projects in the pipeline."

FAR Struggling to Secure Cash for Sangomar Development

[](https://www.worldenergyreports.com/images/orig/6547ca111298) Sangomar FPSO Render - Image Credit: Woodside

Australian oil company FAR, a partner in the recently sanctioned Woodside-operated Sangomar offshore oil field in Senegal, has said that its ability to secure a loan for its part of Sangomar capex has been compromised by the coronavirus pandemic and oil price crash.

"The COVID-19 pandemic combined with the precipitous fall in Brent oil price by over 60% since January 2020 has adversely impacted global financial markets including the global availability of credit," Far said Monday.

"Consequently, the company’s ability to close the Sangomar Project debt arrangements that were ongoing during this time have been compromised such that the lead banks to the senior facility have now confirmed that they cannot complete the syndication in the current environment," it said.

"As a result, the Board is of the opinion that, in addition to the senior facility, neither the junior nor mezzanine facilities that were being arranged will be able to be completed for the foreseeable future," FAR said.

The [$4.2 billion Sangomar project was sanctioned in January](https://www.oedigital.com/news/474637-major-offshore-project-in-senegal-reaches-fid), with a plan for it to produce first oil in 2023, via a MODEC-supplied FPSO.

Woodside is the operator of the three blocks offshore Senegal (Sangomar Deep, Sangomar Offshore, Rufisque Offshore) with a 35 percent stake. Its partners are Cairn with 40%, Far Ltd with 15%, and the Senegal National Oil Company, Petrosen with 10%.

Oil Crash Puts Africa's Cash-Strapped Producers in Peril

[](https://www.worldenergyreports.com/images/orig/111437) For Illustration Only - An FPSO Offshore Angola - Credit: Igor Kardasov / AdobeStock

Collapsing oil prices have left African producers facing not only lost revenue when they most need it to tackle coronavirus, but also a fall in hard-won market share they may never regain.

The continent's producers such as Nigeria, Angola and Algeria cannot compete with the lower costs of erstwhile allies Saudi Arabia and Russia, who are flooding the market with oil.

In a sign of their desperation, the Republic of Congo's oil minister wrote to OPEC secretary-general Mohammad Barkindo on March 20 calling for an urgent meeting to find a way to keep member nations from sinking into recession.

But while desperate for OPEC+, the Organization of the Petroleum Exporting Countries plus Russia, to ride to the rescue, Africa's oil producers have little leverage over them.

"They have no power," one Nigerian oil industry source told Reuters. "All they can do is ask."

Although non-OPEC nations such as Britain, Norway, and the United States all have relatively high-cost production, their diversified economies mean they are not dependent on oil.

As well as hitting already tight budgets, the oil price drop had led oil majors to cut billions from spending plans. The longer-term impact for the comparatively costly African fields could be far more painful.

"Companies are reviewing their whole portfolios on a daily basis," said Roderick Bruce, principal research analyst for Africa at IHS Markit, which forecasts final investment decisions on the continent could hit historic lows this year.

"They (African countries) are in a very difficult position," Bruce added, citing their higher production costs.

In Nigeria, for instance, production is forecast to fall by 35% without offshore field investments. Across Africa, Rystad estimates delayed spending could mean 200,000 barrels per day (bpd) drop in expected output by 2025.

"The discipline that's going to be introduced will be a shock to the system," said Alex Vines, head of the Africa Programme at British think-tank Chatham House.

"This is really different terrain, and these are very vulnerable economies," Vines added.

Larger nations are also elbowing African producers out of incredibly competitive spot trade.

They cannot match the agile, aggressive marketing that saw Saudi Arabia slash its selling prices almost immediately after the collapse of the OPEC+ deal.

By comparison, Nigeria took nearly two weeks to make record cuts to its official selling prices.

The country is also struggling to sell its oil, which is rich in the gasoline and jet fuel that the world is not using as a result of the coronavirus pandemic.

While Angola's production has fallen from close to 2 million barrels per day (bpd) a decade ago to 1.4 million bpd, it had been in the midst of reforms which were meant to boost output.

And Equatorial Guinea is trying to auction new licenses and find a replacement for ExxonMobil, which wants to leave.

CASH CRUNCH

The sudden cash crunch is also hindering the ability of Africa's oil producers to manage growing coronavirus outbreaks and a group of African finance ministers has called for a $100 billion stimulus package to help deal with the pandemic.

Health systems across the continent are already chronically underfunded and citizens are often too poor and tightly packed in slums to stock food or self-isolate, while the oil crunch also casts doubt on whether nations can craft rescue packages or pay soldiers and police to enforce lockdowns or combat unrest.

Nigeria, which has cut nearly $5 billion from its budget and promised a halt to all non-essential projects, said it needs 120 billion naira ($333.33 million) to fight the coronavirus outbreak.

Algeria, whose public debt rose to 45% of gross domestic product at the end of last year from 26% in 2017, plans 30% public spending cuts and has directed state energy firm Sonatrach to halve planned investment to $7 billion.

Angola, where oil production has fallen steadily in recent years, is mulling a $3 billion Eurobond offering to shore up a budget based on $55 per barrel oil, while debt-ridden Congo Republic has been trying to renegotiate $1.7 billion of oil-backed loans.

 ($1 = 360.0000 naira)

(Additional reporting by Lamine Chikhi in Algiers and Dmitry Zhdannikov and Ahmad Ghaddar in London; Editing by Alexander Smith)

Teekay in Ten-Year FPSO Contract with BP

[](https://www.worldenergyreports.com/images/orig/111399) Petrojarl Foinaven - Image by Andrew Blagg - MarineTraffic

Teekay Corporation has secured a ten-year contract for its 1996-built Petrojarl Foinaven FPSO with Britoil Limited, a BP subsidiary, at the Foinaven field west of the Shetland Islands in the UK.

Under the terms of the contract, Teekay is expected to receive an upfront payment of approximately $67 million in cash, a nominal per-day rate over the life of the contract, and a lump sum payment at the end of the contract period, which is expected to cover the costs of recycling the FPSO unit in accordance with the EU Ship Recycling Regulations.

As part of the transaction, Teekay Offshore Partners, [now known as Altera Infrastructure](https://www.oedigital.com/news/476907-teekay-offshore-changes-name), has entered into agreements with the Britoil directly to provide the operations and shuttle tanker services for the Foinaven FPSO.

“We are pleased to announce this new contract for the Foinaven FPSO, which allows our customer to continue to maximize the value of the Foinaven field whilst eliminating Teekay’s operational exposure to the FPSO unit,” commented Kenneth Hvid, Teekay’s President and CEO.

“The new contract further reduces our exposure to the offshore business, which is a strategic priority, improves our profitability, and allows us to further delever and strengthen our balance sheet.”

BP North Sea Regional President, Ariel Flores, said, "This new arrangement will enable BP and its joint venture partner RockRose Energy to introduce an innovative contractual framework for the FPSO’s operating services and shuttle tanker provision, giving BP greater influence over the strategic direction of operations, while allowing us to build on our existing strong relationship with Altera Infrastructure.  It will also help ensure safe, reliable and efficient operations out to at least 2025 and give us space to set the Foinaven area up for future success.”

Altera Infrastructure FPSO President, Chris Brett, commented, “We are proud of our 24 years of continuous operations on the Foinaven field in the harsh West of Shetlands environment. This innovative new contractual model allows us to keep providing our unique competency to BP and their partners as we work together to extend the Foinaven field safely into the future.”

Aoka Mizu FPSO Worker Tests Positive for COVID-19

[](https://www.worldenergyreports.com/images/orig/111392) Aoka Mizu FPSO - Source: Hurricane Energy

Oil and gas firm Hurricane Energy has confirmed that a crew member on the Aoka Mizu FPSO off the UK has tested positive for COVID-19.

Hurricane said Friday that the worker "has been evacuated to the mainland for medical reasons and subsequently tested positive for COVID-19."

"The evacuated individual was transported onshore by an HM Coastguard helicopter and is now receiving medical treatment," Hurricane said.

Hurricane said it was supporting Bluewater Lancaster Production (UK) Ltd ("Bluewater"), installation operator of the Aoka Mizu FPSO, with its response.

"Bluewater is working within the guidelines provided by NHS Scotland, Health Protection Scotland, and Oil and Gas UK in determining the next steps," it added.

The Aoka Mizu FPSO is located at Hurricane Energy's Lancaster oil field. According to Hurricane, production operations at Lancaster have not been affected. Lancaster produces approximately 20,000 barrels of oil per day.

In an update earlier this week, Hurricane said that while the Lancaster Early Production System, produced via Aoka Mizu FPSO, costs of $17 per barrel at current production levels and oil prices, operating cash flow from the Lancaster EPS would be materially lower than previously forecasted for an indeterminate period.

"Hurricane has a strong balance sheet, including $164.3million of unrestricted cash (at 18 March 2020) and is therefore in a strong position to weather this current downturn. However, should this change in the market environment persists, it is likely to have a material impact on our capacity to fund capital expenditure," Hurricane Energy said Tuesday.

Woodside Halves Spending Plans. Delays Scarborough, Browse FIDs

[](https://www.worldenergyreports.com/images/orig/111388) Scarborough field illustration - Credit: Woodside

Woodside Petroleum halved its forecast spending for 2020 and deferred go-ahead decisions for its two biggest gas projects to ride out the pain of the coronavirus pandemic and plunging oil prices.

Australia's top independent gas producer said on Friday it would slash total planned spending this year by around 50% to $2.4 billion. That included cutting investment spending by 60% to around $1.8 billion and operating expenses by $100 million.

"These are extraordinary and challenging times for us. A few months ago no one could have really foreseen these circumstances," Woodside Chief Executive Peter Coleman told analysts on a conference call.

Woodside's cuts are larger than those already announced by seven of the world's major oil companies, including Saudi Aramco and Royal Dutch Shell, which are at around a drop of 20% from their original plans.

Coleman said Woodside's decisions would also help position the company to chase acquisition opportunities that might emerge rather than tying it down to development projects, and could allow it to return cash to shareholders.

"We entered this period in good shape and intend to get through it and be ready to pursue opportunities when they arise," he said.

Asked about "inorganic growth" opportunities, such as snapping up partners' stakes in its projects, he said: "Clearly we, like everybody else, are looking at those particular opportunities, but I'd say it's too early to conclude that we'll go one way or the other."

Woodside said it would defer a final investment decision on its $11 billion Scarborough project, co-owned by top global miner BHP Group, and its Pluto LNG expansion to 2021. It had targeted a go-ahead on the twinned projects in mid-2020.

An investment decision on the $20.5 billion Browse project has also been deferred, to an unspecified date.

Scarborough, the Pluto LNG expansion and Browse, Australia's biggest undeveloped gas field, are key to driving Woodside's planned 6% growth a year in output through 2028.

In spite of the crash in global oil and gas demand and virus-induced uncertainty, Woodside said it has continued to see gas demand from its core customers in north Asia.

As a result, it has not been forced to trim production and has reaffirmed its output forecast of 97-103 million barrels of oil equivalent in 2020. However, it expects to feel the full impact of lower prices late in the second quarter.

It has hedged 11.85 million barrels of oil between April and December at an average price of $33.47 a barrel.

Analysts said Woodside's cuts were prudent at a tough time.

"We think there is a reasonably high likelihood that the $500 million of discretionary expenditure remaining in CY20 will continue to be pared back considering the choppy oil market," Citi analyst James Byrne said.

Woodside's shares, down nearly 50% over the past three months, rose 3% on Friday in a broader market down 0.9%.

The company recently began work on its other major growth project, the $4.2 billion Sangomar oil project off Senegal. Coleman said no major spending deferral is expected on the project, due to start producing in 2023.

[However it has run into supply chain issues on well-head parts for Sangomar](https://www.oedigital.com/news/476949-woodside-partners-in-talks-over-4-2b-sangomar-project-timing), as they are manufactured in northern Italy, one of the regions worst hit by the coronavirus.

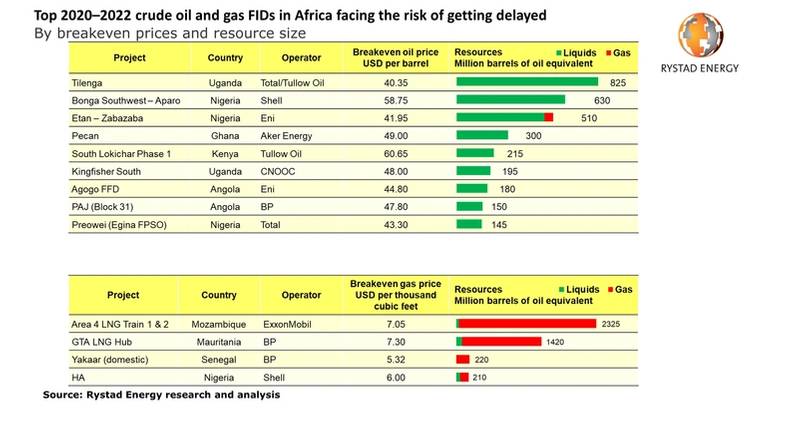
(Reporting by Sonali Paul in Melbourne and Nikhil Kurian Nainan in Bengaluru; Editing by Maju Samuel and Richard Pullin)

Covid-19 and Cheap Oil to Hit African pre-FID Oil Projects

[](https://www.worldenergyreports.com/images/orig/111342) According to Rystad, Aker Energy's Pecan Project has a breakeven of $49 per barrel. Image credit - Aker Energy

Norwegian energy intelligence firm Rystad Energy expects that majority of Africa’s top planned oil and gas projects that were expecting final investment decisions under an oil price assumption of between $55 and $60 per barrel will be hit hard by the current oil prices and coronavirus impact.

"Now, with oil prices falling to below their break-even costs, Rystad Energy expects many projects to be delayed, causing the continent’s expected liquids production to decline for most of this decade and energy-reliant state budgets to take significant hits," Rystad said.

While the oil price is currently hovering well below $35 per barrel, the top upcoming final investment decisions (FIDs) in Africa have a breakeven crude price of over $45 per barrel, with some even close to $60 per barrel, Rystad added.

"The investments for major planned oil and gas projects will now see a timeline shift or even spending cut altogether, which will ultimately impact production levels in this region," says Siva Prasad, senior upstream analyst at Rystad Energy.

**High long-term impact**

Rystad estimates that the timeline delays for these pre-FID projects in Africa could lead to a 200,000 barrels-per-day drop in expected liquids production on average between 2021 and 2025. The impact could be much higher in the longer term, with liquids production set to drop on average by close to 1.185 million barrels per day over the years 2026 to 2030.

"The economies of the hydrocarbon-producing African nations are heavily reliant on their respective oil and gas output to meet both domestic energy needs and exports. For example, Nigeria based its 2020 capital budget on plans to produce 2.1 million barrels per day of oil this year at a crude price of $57 per barrel," Ristad said.

“An extended period of the current price scenario could, therefore, prove detrimental to the health of these economies,“ adds Prasad.

Although the OPEC+ members that are currently pumping millions of unneeded barrels of crude into the market are mainly seeking to undercut the US shale revolution, the collateral damage on African petroleum producers’ economies whose hydrocarbon projects are disrupted may be severe.

Golar Taps Oceaneering for FLNG Inspection and Maintenance

[](https://www.worldenergyreports.com/images/orig/ad3057111304) For Illustration; Golar is to deliver an FLNG unit for BP's Tortue Ahmeyim development in Senegal/Mauritania offshore zone - Image Credit: BP

Offshore energy services provider Oceaneering has been awarded a contract by Golar LNG for an FLNG vessel maintenance build, and inspection and maintenance program.

The scope of work includes an asset register build, a full maintenance build program, a risk-based inspection assessment, and the development of a corrosion management strategy.

Oceaneering said it would provide insight through forensic maintenance and inspection planning, detailed technical reviews, and the identification of schedule improvements. The company did not provide financial details of the deal.

"This will be integrated into a single management system to ensure a holistic, cohesive approach for optimal asset reliability," the company said.

“FLNG offers an economical alternative to large, onshore LNG assets, but these benefits can only be attained if production uptime and reliability are optimized,” said Helen West, Integrity Director at Oceaneering.

Golar has so far delivered one FLNG unit, for Perenco in Cameroon. The company is working to convert an FLNG unit for BP's Tortue development in Mauritania/Senegal Area, expected to be operational in 2022.

Oceaneering's West added: "By delivering a fully integrated maintenance and risk-based integrity program that determines optimized inspection activities, we ensure enhanced reliability; future-proofing it with rightsized maintenance plans and efficient inspection enactment.

“We’re thrilled to be working with Golar, a new customer that shares our forward-thinking views around integrity management. In partnership, we aim to showcase a new and improved way of delivering maintenance management and inspection services to the global LNG market."

The maintenance and inspection scope will be managed from Oceaneering’s Norway and U.K. asset integrity hubs.

Woodside, Partners in Talks over $4.2B Sangomar Project Timing

[](https://www.worldenergyreports.com/images/orig/6547ca111298) Sangomar FPSO Render - Credit: Woodside

Woodside Petroleum and its partners are in talks on the timing of their $4.2 billion Sangomar oil project off Senegal, with coronavirus restrictions and collapsing oil prices hampering work on the project.

Woodside, Cairn Energy Plc, FAR Ltd and the Senegal government just began the development of the offshore oil project,[following final investment decision (FID) in January, and had aimed to start producing oil in 2023.](https://www.oedigital.com/news/474637-major-offshore-project-in-senegal-reaches-fid)

The project is Senegal's first oil development and key to Woodside's growth plans over the next seven years.

"In taking a positive FID in January 2020, we considered short-term price fluctuations and long-term forecasts. However, with the recent COVID-19 implications on markets, our contractors and government, it is prudent to take stock on significant emerging delivery uncertainties," Woodside, operator of the project, said in emailed comments on Wednesday.

The comment shows how swiftly market conditions have deteriorated in the past week. On March 16, Woodside told Reuters: "We currently do not anticipate any impact on our first oil timing."

Senegal has suspended all international commercial flights to help slow the spread of the novel coronavirus.

FAR said on Wednesday the partners' review would include how to cut costs, delay spending or both, and any impact on the timeline to first production.

The project involves building a 100,000 barrels per day floating production, storage, and offloading system.

FAR, which discovered the Sangomar field and has no other projects underway, has been working to line up more than $300 million in debt to help fund its share of the project costs, but that effort has slowed.

"Disruptions caused by the COVID-19 pandemic and the crash in oil price are presenting challenges to our debt process," FAR said in a statement to the Australian stock exchange.

The Sangomar project is one of three major projects key to Woodside's growth and is the only one of those which has reached a final go-ahead.

"If there is any material impact to Woodside's capex guidance, this would be communicated in line with our market disclosure requirements," Woodside said.

Woodside in February flagged investment spending would range between $4.1 billion and $4.4 billion in 2020, with a small portion of that on Sangomar.

(Reporting by Sonali Paul; Editing by Stephen Coates)

Only a Handful of FPS to Be Ordered in 2020, Down from 18 Expected

[](https://www.worldenergyreports.com/images/orig/111273) For Illustration; An FPSO - Image by Arjen - AdobeStock

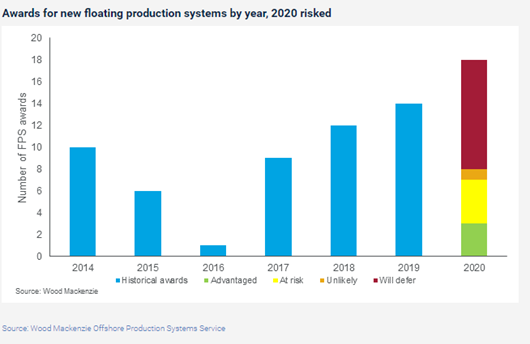
Energy intelligence company Wood Mackenzie has downgraded its expectations when it comes to new orders for floating production systems in 2020, citing the oil price crash.

Mhairidh Evans, principal analyst in Wood Mackenzie’s upstream supply chain research team said pre-FID greenfield projects stand out as the first to fall, which will have a serious impact on the supply chain.

"We had forecast growth in floating production systems (FPS) market for 2020 with up to 18 new contract awards. Now we expect only a handful to go ahead, which would take the FPS market to 2015/16 levels.

Coming into 2020, the service sector had been struggling with low margins, over-supply and weak investor sentiment, Woodmac says, adding that any optimism regarding an uptick in 2020 has been "unequivocally crushed."

Evans said: "Even more capital discipline from operators will reduce demand significantly in 2020. Whether offshore or in the Lower 48, only a handful of major projects are expected to move forward this year.”  
"Our preliminary analysis suggests global upstream capital investment will fall by at least 25% in 2020. Most of that impact will be through activity reduction, although OFS pricing deflation will play a role."



“In the US Lower 48 market, we are already seeing major pricing concessions. Some pressure pumpers have reduced prices by as much as 20%, while rig rates have dropped by about 15%.”

There have been fewer immediate reactions by offshore service providers, but we expect now very low levels of new offshore contracting, Evans said.

"Requests for concessions on existing contracts seem inevitable. And any operator bold enough to enter into new rig contracts can expect rock bottom rates as the rig market heads towards low utilization levels over the next year."

"We question how much further OFS pricing can reduce though. Stretched balance sheets and low margins were still commonplace for the service sector coming into 2020. Companies had already cut so much, it’s hard to identify further savings without drastic measures. This includes refinancing and the restructuring of business models. Headcount cuts and bankruptcies are inevitable."

She added: “Excess capacity is also an issue. Companies holding onto idle assets ‘just in case’, will quickly think again. The prospect of sub-US$40/bbl oil will force profound change in the sector’s footprint. While there’s short-term pain associated with this, it could ultimately create a more sustainable business for those that survive the downturn.”

Oilpice.com

Renewables Boomed In 2019, But This Year May Be Different

By [Irina Slav](https://oilprice.com/contributors/Irina-Slav) - Apr 07, 2020, 4:00 PM CDT

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Renewable energy projects constituted three-quarters of all new power generation capacity projects in the world last year, the International Renewable Energy Agency said in a new [report](https://www.irena.org/newsroom/pressreleases/2020/Apr/Renewables-Account-for-Almost-Three-Quarters-of-New-Capacity-in-2019). In even better news, IRENA said that renewable capacity additions rose by 7.6 percent last year and that they exceeded fossil fuel power-generation capacity additions by a factor of 2.6.

2019 was a good year for renewables, it seems, with solar and wind accounting for as much as 90 percent of the total. And yet the 176 GW added during that year was lower than the 179 GW added in 2018 in new capacity, suggesting a slowdown in new solar and wind additions, which may or may not be surprising given a change in the Chinese subsidy regime for new renewable projects and cost-efficiency considerations.

“While the trajectory is positive, more is required to put global energy on a path with sustainable development and climate mitigation – both of which offer significant economic benefits,” said the head of IRENA, Francesco La Camera. “At this challenging time, we are reminded of the importance of building resilience into our economies. In what must be the decade of action, enabling policies are needed to increase investments and accelerate renewables adoption.”

This increase in investments, however, could prove challenging given the current global economic situation. As is always the case, low oil prices negatively affect renewable investments. This time, however, the situation grew even more complicated by the coronavirus pandemic that is already hurting supply chains, including in the renewables sector.

[**Premium: What Will $15 Oil Mean For Producers?**](https://oilprice.com/Energy/Energy-General/What-Will-15-Oil-Mean-For-Producers.html)

Several large-scale renewable energy projects already missed their deadlines last year, La Camera said. This year, things are likely to get even more complicated and not because of low oil prices or the more relevant gas prices.

“Oil plays a negligible role in power generation and therefore does not compete with renewables in this respect,” La Camera [said](https://www.irena.org/newsroom/pressreleases/2020/Mar/IRENA-Director-General-Statement-on-oil-prices-and-impact-on-the-renewable-energy-sector) last month after the global oil benchmarks took a plunge. “Renewables have become the dominant source of new power generation capacity over the last six years because they are competitive at the bottom end of the conventional fossil fuel power generation cost range – primarily with coal.”

However, gas is cheap too, and some governments are cutting subsidies for new renewable capacity to see if it can stand on its two feet without strong government support. China is the best case in point. After surprising markets with a cut in subsidies for new solar and wind power installations, this year Beijing [announced](https://www.caixinglobal.com/2020-03-11/china-to-slash-subsidies-for-renewable-energy-amid-drive-to-cut-state-support-101527138.html) even more reductions. The country will cut subsidies for new solar farms by 50 percent and suspend state support for offshore wind entirely.

Meanwhile, in Europe, the Netherlands is [doubling](https://www.smartcitiesworld.net/news/news/netherlands-doubles-renewable-energy-subsidies-5143) its subsidies for renewable energy in a bid to achieve a 25-percent emission cut from 1990 levels by the end of the year. While the Netherlands may have 4 billion euros set aside just for that, other European governments are too busy finding a way to support the member states hardest hit by the coronavirus. This support, according to sources from Brussels who spoke to CNBC, could be worth some $260 billion (240 billion euros).

Of course, the EU’s renewable energy budget is a separate thing. However, with economies on the brink of collapse, it will be a while before the renewable industry recovers to take advantage of that budget.

A group of states in the U.S. have [launched](https://cleantechnica.com/2020/04/03/virus-or-not-us-states-foment-100-renewable-energy-rebellion/) a new initiative dubbed the “100% Clean Energy Collaborative.” The aim of the action is for much more ambitious emissions targets than federal policies envisage. The initiative will seek to help individual states from that group hit their goals. How successful it will be remains to be seen after the pandemic noise dies down. Chances are there will be renewable projects that will get delayed or dropped while the industry battles the effects of the unprecedented global response to the virus. All industries have been affected. None is immune. The world’s shift to a cleaner future may have been delayed for a while.

By Irina Slav for Oilprice.com

**IRENA Director-General Statement on Oil Prices and Impact on the Renewable Energy Sector**

14 March 2020| [Press Release](https://www.irena.org/newsroom/pressreleases)



“Oil market volatility is unlikely to have a significant impact on renewable energy plans and investments.  
  
“Oil plays a negligible role in power generation and therefore does not compete with renewables in this respect. Renewables have become the dominant source of new power generation capacity over the last six years because they are competitive at the bottom end of the conventional fossil fuel power generation cost range – primarily with coal.  
  
"Oil plays a much more important role in the transport sector, which accounts for half of total demand, and where without low-emission transport policies in place, an extended period of low oil prices may impact the speed of electric vehicle adoption.  
  
“Conversely, oil price volatility may undermine the viability of unconventional oil and gas resources as well long-term contracts, providing a window of opportunity to reduce or redirect fossil fuel subsidies towards clean energy, while minimising the potential of social disruption.  
  
“Data from the previous oil price crash in 2014 shows no evidence of a link between the two. On the contrary, renewables investment reached new heights in both 2014 and 2015.

"The outbreak of COVID-19 threatens global supply chains in many sectors and is therefore likely to have an impact on renewable energy. The severity and duration of both situations remains to be seen.  
  
“What is critical to understand, is that the long-term planning horizons involved, and the momentum that currently exists in the energy transformation, means neither low oil prices nor COVID-19 will interrupt or change our path towards decarbonisation of our societies and towards the achievement of the sustainable development goals.”

https://www.smartcitiesworld.net/news/news/netherlands-doubles-renewable-energy-subsidies-5143

Netherlands doubles renewable energy subsidies

[News](https://www.smartcitiesworld.net/news/news)23 Mar 2020[by Sue Weekes: News editor, Smart Cities World](https://www.smartcitiesworld.net/sue-weekes)

In December 2019, the Supreme Court of the Netherlands ordered the government to cut the nation’s CO2 emissions by 25 per cent from 1990 levels by the end of 2020.



The Dutch Government plans to double green energy subsidies to €4 billion in 2020, from a previously planned €2 billion to meet its promise to cut CO2 emissions.

Eric Wiebes, minister for economic affairs and climate policy, and member of the cabinet of the Netherlands, wrote to parliament explaining the measure was aimed at reducing CO2 emissions by 25 per cent by the end of 2020.

Energy transition

“There are a large number of projects that can offer a cost-effective contribution to further development, making the energy transition more sustainable,” said Wiebes.

According to data and analytics company GlobalData, the 2020 Sustainable Energy Production (SDE+) spring budget will make the Netherlands’ CO2 reduction target feasible and affordable.

The Dutch Climate Agreement aims to reduce CO2 emissions in the Netherlands by setting a national reduction goal of 49 per cent lower in 2030 than in 1990. In December 2019, the Supreme Court of the Netherlands ordered the government to cut the nation’s CO2 emissions by 25 per cent from 1990 levels by the end of 2020.

*“The government’s resolution to reduce emissions by 49 per cent by 2030 will result in massive renewable energy capacity addition.”*

One of the key policy measures to meet the climate goals is the SDE+ scheme, which provides financial support to the producers for the renewable energy they generate. The 2020 SDE+ spring tender round is the last time the SDE+ subsidy will be awarded in its current form. The SDE+ stimulation subsidy will later be expanded to an incentive for sustainable energy transition (SDE++).

“There are a large number of renewable energy projects that can offer cost-effective contribution for further development and make the energy transition more sustainable,” said Bhavana Sri Pullagura, power analyst at GlobalData.

“The 2020 SDE+ will be used to help projects that have a short implementation period and those projects which did not get funding in the previous tender. This is expected to give an extra boost to the development of renewable energy through the stimulation of both new and old projects for which the required permits were previously missing.”

Pullagura continued: “The government’s resolution to reduce emissions by 49 per cent by 2030 will result in massive renewable energy capacity addition. By 2030, the renewable energy capacity is projected to increase at a compound annual growth rate (CAGR) of 12 per cent. The subsidies provided by the government will help in bringing down the cost curve for wind and solar energy, making them the most promising areas of new capacity additions.”

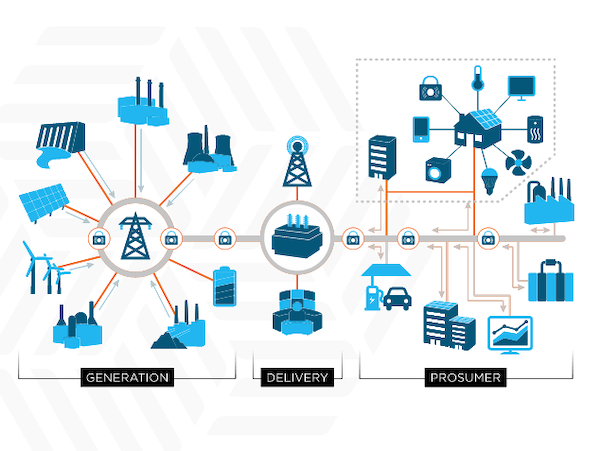
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<https://cleantechnica.com/2020/04/03/virus-or-not-us-states-foment-100-renewable-energy-rebellion/>

# Virus Or Not, US States Foment 100% Renewable Energy Rebellion

April 3rd, 2020 by [**Tina Casey**](https://cleantechnica.com/author/seawolf/)

If fossil fuel stakeholders hoped for the COVID-19 crisis to give them a little breathing room, they may have to do some re-hoping. The US Energy Department dropped yet another one of its renewable energy truth bombs earlier this week, and now a coalition of economically powerful US states has followed up with a new initiative aimed at accelerating 100% clean energy goals across the country. That’s not just a state-level thing, either. The new initiative aims at municipalities, corporations, utilities, and other stakeholders, too.

[](https://cleantechnica.com/files/2020/04/renewable-energy-US-grid.png)

New state-lead clean energy collaboration dovetails with Energy Department’s Grid Modernization Initiative (screenshot v[ia US DOE](https://www.energy.gov/sites/prod/files/2018/07/f53/2.2%20Grid%20Modernization%20Initiative%20-%20Bindewald,%20DOE_0.pdf)).

### Renewable Energy = Economic Power

Sure, there have been other state-based [**clean energy initiatives**](https://www.triplepundit.com/story/2019/after-cop25-more-us-states-and-dc-coordinate-climate-action/86041/) over the past few years, and the corporate sector has also been [**pushing clean power**](https://cleantechnica.com/2018/10/08/clean-power-plan-or-not-coal-caught-in-corporate-death-squeeze-ct-exclusive-interview/).

This new initiative, though, is a horse of a different color. It is spearheaded by states that wield considerable influence over the US economy and, for that matter, the global economy.

Called the “[**100% Clean Energy Collaborative**](https://cesa.org/about-us/member-news/newsitem/new-collaborative-will-help-states-achieve-100-clean-energy-goals),” the initiative comes under the umbrella of the organization [**Clean Energy States Alliance**](https://cesa.org/).

As a group, CESA members pack an economic punch, and the new collaboration is spearheaded by an [**advisory committee**](https://cesa.org/projects/100-clean-energy-collaborative/advisory-committee/) that picks from the top. Two members of the advisory committee, for example, are [**California — aka the world’s 5th-largest economy**](https://markets.businessinsider.com/news/stocks/california-economy-16-mind-blowing-facts-2019-4-1028142608) — and New York State, which weights in as [**the world’s 11th-largest economy**](https://markets.businessinsider.com/news/stocks/11-mind-blowing-facts-about-new-yorks-economy-2019-4-1028134328).

Also lending economic force to the effort is the 9-state [**Regional Greenhouse Gas Initiative**](https://www.c2es.org/content/regional-greenhouse-gas-initiative-rggi/), a consortium of 9 northeastern states that includes two other advisory committee members — Connecticut and Rhode — as well as New York.

As of 2018, those 9 northeastern states accounted for [**more than 1/7 of US GDP**](https://www.analysisgroup.com/globalassets/uploadedfiles/content/insights/publishing/analysis_group_rggi_report_april_2018.pdf).

Another member of the advisory committee is New Jersey, which was previously torn from [**the RGGI carbon venture**](https://www.triplepundit.com/story/2014/one-state-conspicuously-absent-new-zev-action-plan/43446) by former governor Chris Christie (yes, [**that Chris Christie**](https://www.motherjones.com/politics/2011/09/audio-chris-christie-koch-brothers-seminar/)). Now under new leadership, New Jersey is set to rejoin RGGI this year.

Other states with representation on the advisory committee also have some interesting features that lend economic pop to the clean tech effort. One of those is Washington State, which is the home of the [**Pacific Northwest National Laboratory**](https://energyenvironment.pnnl.gov/gridmod.asp). PNNL is key leader in the Energy Department’s [**renewables-friendly grid modernization**](https://cleantechnica.com/2019/01/13/all-the-good-news-about-renewable-energy-from-the-us-department-of-energy/) initiative.

Then there’s Hawaii, which has become a living laboratory for the economic benefits — and resiliency advantages — of [**harvesting local energy**](https://cleantechnica.com/2015/03/29/new-offshore-wind-energy-farm-aims-hawaii-trifecta/) instead of [**shipping in fossil fuels**](https://www.hawaiibusiness.com/5-reasons-to-be-optimistic-about-hawaiis-clean-energy-future/).

That leaves the curious case of Nevada on the advisory committee. If you have any thoughts about that, drop us a note in the comment thread. A couple of hints: Nevada is host to a key [**national security site**](https://www.nnss.gov/pages/about.html) among other federal facilities. It is also one of the few states with [**significant geothermal resources**](https://www.eia.gov/state/analysis.php?sid=NV) in operation.

### The 100% Clean Energy Collaboration

As for the collaboration itself, CESA notes that 14 states and Washington, DC already have established aggressive clean energy goals leading to 100%. The main thrust of the collaboration is to accelerate those efforts, with the ultimate aim of pulling the rest of the nation along with them.

In a public statement, New York State connected the new collaboration with nationwide economic growth.

“Convening with sister states to achieve nation-wide success under the 100% Clean Energy Collaborative will support sustained growth of the nation’s green economy at a critical time in the fight against climate change,” explained Doreen Harris, who is VP of large-scale renewable energy for the state’s energy research agency [**NYSERDA**](https://www.nyserda.ny.gov/).

Basically, the 100% Clean Energy Collaborative will serve as a platform for clean energy states to help each other out. CESA already has a solid track record in that area, by facilitating renewable energy portfolio standards in a collaboration of 29 states plus Washington, DC.

But wait, there’s more. The Collaborative also seeks to network with municipalities and utilities that are seeking 100% clean energy, as well as private sector stakeholders.

That’s interesting, considering the influence that big corporate employers could wield over states that have been lagging behind the clean energy curve.

We haven’t even begun to talk about the potential for interplay between the Collaboration and the nation’s sprawling network of [**rural electric cooperatives**](https://cleantechnica.com/2020/03/28/off-the-radar-renewable-energy-explosion-after-covid-19-dust-settles-ct-exclusive-background-interview/). CleanTechnica is reaching out for their insights, so stay tuned for more on that.

### Fossil Fuels Crashing, Renewable Energy Rising

Meanwhile, yet another in a series of interesting coincidences (or not-coincidences as the case may be) occurred this week, when news surfaced that at least seven [**top oil and gas execs**](https://www.cnbc.com/2020/04/01/energy-ceos-will-meet-with-trump-friday-at-the-white-house-as-oil-prices-tumble.html) were heading to the White House for a personal meeting — a rare thing these days — in search of an assist for their industry.

As if to troll the group, the Energy Department promptly cut loose with two key renewable energy funding announcements [**promoting offshore wind**](https://cleantechnica.com/2020/04/02/curious-timing-new-offshore-renewable-energy-research-22-million-20-million/), among other renewable marine energy resources.

No word yet on whether or not [**coal stakeholders**](https://cleantechnica.com/2019/07/12/trump-gives-clean-coal-the-bums-rush-but-natural-gas-gets-star-treatment/) get a top-level meeting of their own. If they get the brush-off, that wouldn’t be a surprise. Despite repeated promises to coal miners from the current occupant of the Oval Office, the US coal industry is in freefall. As they say, failure is an orphan.

As if to underscore the point, earlier this week energy regulators in New Mexico enabled the utility PNM to cut ties with the notorious 847-megawatt [**San Juan Generating Station**](https://the-journal.com/articles/172795), which is not good news for the power plant’s [**feeder coal mine**](https://www.searchlightnm.org/power-switch).

A firm called Enchant Energy still thinks it can keep San Juan going with a proposed [**carbon capture operation**](https://cleantechnica.com/2019/12/16/carbon-capture-on-the-ropes-at-san-juan-coal-power-plant-or-not/), but those [**energy regulators in New Mexico**](https://www.pnmresources.com/~/media/Files/P/PNM-Resources/rates-and-filings/San%20Juan%20Abandonment/2020/19-00018-UT%20Final%20Order%20on%20Request%20for%20Issuance%20of%20a%20Financing%20Order.pdf) seem to be not thinking the same think.

According to a new study from our friends over at IEEFA, coal could sink to about [**10% of US electricity generation**](https://ieefa.org/ieefa-u-s-the-trouble-with-enchant-energys-carbon-capture-project/) within the next five years or so.

That’s quite a turnaround for a fuel that claimed a 50% share as dawn broke over the 21st century. Just goes to show how quickly things can change. Something to think about as energy stakeholders of all sorts jockey for position in the post-COVID world of the future.

Follow me on [***Twitter***](https://twitter.com/TinaMCasey).

Image (screenshot): Grid Modernization Initiative via [***US Department of Energy***](https://www.energy.gov/sites/prod/files/2018/07/f53/2.2%20Grid%20Modernization%20Initiative%20-%20Bindewald,%20DOE_0.pdf). 

# Staying on Course: Renewable Energy in the Time of COVID-19

07 April 2020| [Press Release](https://www.irena.org/newsroom/pressreleases)

### **Statement by Francesco La Camera, IRENA Director-General**



In a short few weeks, much of the world has been shut down due to the novel coronavirus, COVID-19, which has crossed borders and oceans, rapidly devastating communities and livelihoods.

Decisions being taken now to address the social and economic impacts of the crisis come amid profound uncertainty about both the course of the pandemic and its long-term ramifications for societies across the world. The immediate priority remains to save as many lives as possible, bring the health emergency under control and alleviate hardship. At the same time, governments are embarking on the monumental task of devising stimulus and recovery packages. These are at a scale to shape societies and economies for years to come.

This response must align with medium- and long-term priorities. The goals set out in the United Nations 2030 Agenda and the Paris Agreement can serve as a compass to stay on course during this disorienting period. They can help to ensure that the short-term solutions adopted in the face of COVID-19 are in line with medium- and long-term development and climate objectives.

Stimulus and recovery packages can also accelerate the shift to sustainable, decarbonised economies and resilient inclusive societies. A coherent design approach is needed to secure political buy-in, business support and social acceptance. As the current crisis makes clear, we can no longer afford to make policy decisions and investments in isolation amid elaborately intertwined social, economic and environmental challenges.

The fundamentally economic, more than financial, nature of this crisis calls for a major state role in the response. This involves defining the strategies and initiating direct interventions for the way out. Expansionary budget policies may be envisaged to support this effort.

Stimulus and recovery measures in response to the pandemic must foster economic development and job creation, promote social equity and welfare, and put the world on a climate-safe path. By making the energy transition an integral part of the wider recovery, governments can achieve a step change in the pursuit of a healthy, inclusive, prosperous, just and resilient future.

Energy transitions are already underway in many countries. These transitions have become increasingly affordable because of forward-looking policy frameworks, ongoing innovations and falling technology costs for renewables. Solar photovoltaic (PV) and wind power have become the cheapest sources of electricity in many markets, with other renewable power sources poised to reach cost parity within a few years. In the power sector, renewables have dominated new capacity additions and increasingly outpaced fossil fuels for the past seven years. Last year alone, renewables accounted for nearly three quarters of global power capacity additions.

The economic fallout from the pandemic is far-reaching, with an adverse impact on many sectors including renewables. For many reasons, however, the impact may be different than in other economic sectors. Governments can turn to a renewables-based energy transition to bring a range of solutions at this difficult moment. Many renewable technologies can be ramped up relatively quickly, helping to revive industries and create new jobs.

Decentralised solutions tend to be comparatively labour-intensive. Adopting renewables can therefore create employment and boost local income in both developed and developing energy markets. Employment in the sector, which reached 11 million jobs worldwide in 2018, could quadruple by 2050, while jobs in energy efficiency and system flexibility could grow by another 40 million.

Decentralised technologies also allow for greater involvement by citizens and communities in energy decisions, with transformative social implications. Importantly, they offer a proven approach for remote health care in energy-poor communities and add a key element to the crisis response toolkit.

In the creation of future infrastructure, energy solutions aimed at scaling up renewables provide a safe and visionary strategic investment choice. Recovery measures could help to install flexible power grids, efficiency solutions, electric vehicle (EV) charging systems, energy storage, interconnected hydropower, green hydrogen and multiple other clean energy technologies. With the need for energy decarbonisation unchanged, such investments safeguard against short-sighted decisions and increased accumulation of stranded assets.

The latest oil price developments and the heightened unpredictability of returns on hydrocarbon investments make the business case for renewables even stronger. Current market dynamics could further weaken the viability of unconventional oil and gas resources and long-term contracts. The moment has come to reduce or redirect fossil-fuel subsidies towards clean energy without added social disruption.

Research and innovation are vital to keep improving the technologies and reduce the costs for sustainable energy. This is especially true in end-use sectors like transport, heating and cooling, as well as for enabling technologies such as energy storage and green hydrogen. Governments must embrace these forward-looking options to ensure that public policies and investment decisions reflect the true potential for low-carbon economic development.

These should be major considerations as policy makers put together recovery measures. A purely market-driven approach will not be adequate, either to respond to the immediate crisis or to mobilise longer-term investments. Governments will have to consider innovative approaches to secure financing at the required scale and speed. Clear long-term objectives, combined with targeted public investment and appropriate market incentives, will also enable the private sector to act swiftly and confidently.

While the current crisis has undoubtedly underlined global interconnections and strengthened the vision of a more resilient society at national and regional levels, it has also highlighted the vast differences in countries’ circumstances and capacities. International co-operation is needed to tackle deeply embedded shortfalls and vulnerabilities, and crisis responses must reflect global co-dependency. Investments must be directed everywhere they are needed, including to the most vulnerable countries and communities.

This year was meant to be a turning point for climate and sustainable development, with 2020 marking the start of the decade of action. The unexpected pandemic, with its devastating consequences for communities and economies is upending plans, interrupting trends and testing assumptions. We are yet to see the contours of the post-COVID world.

The mounting loss of life is devastating, and the strain on communities and economies will require thoughtful and far-reaching strategies. A wider perspective is needed, viewing energy, society, economy and the environment as parts of a unique, holistic system.

The response must provide more than just a bail-out for existing socio-economic structures. Now, more than ever, public policies and investment decisions must align with the vision of a sustainable and just future. Such undertakings are certainly ambitious. But they are entirely achievable with a collective, co-ordinated response.

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On 20 April 2020, IRENA will release its first Global Renewables Outlook, examining the building blocks of an energy system based on renewables, along with investment options to meet climate goals and policy frameworks to ensure a just transition. An accompanying policy paper will outline key considerations aligning energy post-COVID recovery with long-term energy and socio-economic sustainability.

<https://oilprice.com/Alternative-Energy/Nuclear-Power/Hydrogen-The-Secret-To-Commercializing-Nuclear-Fusion.html>

Hydrogen: The Secret To Commercializing Nuclear Fusion

By [Haley Zaremba](https://oilprice.com/contributors/Haley-Zaremba) - Mar 14, 2020, 4:00 PM CDT

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Scientists around the world are racing towards a green energy solution that is cheap, efficient, and scalable enough to replace fossil fuels before our carbon-based economy steers us past the tipping point towards catastrophic climate change. Solar cells are being improved at breakneck speed, wind turbines are being swiftly scaled up, and geothermal energy is being considered in more and more locations, but few projects are more buzzed about than those concerning the “silver bullet” and “holy grail” energy solutions that are green hydrogen and nuclear fusion. Now, there’s news of a breakthrough solution that involves both.

The DIII-D National Fusion Facility, which is operated by General Atomics operates on behalf of the United States Department of Energy (DOE), has long been using hydrogen gas into their tokamak, the massive donut-shaped particle colliders used to create nuclear fusion. But now, a new study indicates that there might be a better way: the use of hydrogen ice pellets. “The studies by physicists based at DOE's Princeton Plasma Physics Laboratory (PPPL) and Oak Ridge National Laboratory (ORNL) compared the two methods, looking ahead to the fueling that will be used in [International Thermonuclear Experimental Reactor] ITER, the international fusion experiment under construction in France,” reports [Phys.org](https://phys.org/news/2020-03-fusion-hydrogen-ice-pellets-effective.html?fbclid=IwAR1hnR5smwAOKH0yJGGXLahthpZiW9DbmgGTInJ02HF5NP8Jqy6oUOHlP_4).

A constant stream of hydrogen is needed to keep fusion reactors running, and the issue of how to do this the most efficiently and effectively is a question with major implications for the potential future of commercial nuclear fusion. This issue will become even more crucial, Phys.org points out, as these reactors continue to scale up, getting bigger and hotter, as we get closer to achieving said commercial nuclear fusion. “As fusion reactors get bigger and hotter it will become harder for the gas to penetrate into the core of the reactor where fusion reactions take place. New methods thus need to be developed to feed the fusion core without degrading the plasma performance.” Enter hydrogen ice pellets. [**Related: Rig Count Inches Lower In Dramatic Week For Oil**](https://oilprice.com/Energy/Energy-General/Rig-Count-Inches-Lower-In-Dramatic-Week-For-Oil.html)

The experiments comparing the traditional injection of room-temperature hydrogen gas with the employment of hydrogen ice pellets show that the latter, somewhat counterintuitively, is better for achieving the ultra-high temperatures needed to fuel the tokamak’s hot inner core to achieve nuclear fusion. “The experiments revealed a significantly higher pressure of plasma—a key to fusion reactions—using hydrogen ice compared to gas injection when the rate of fueling is roughly evenly matched between the two methods,” the report continues.

This breakthrough is just the latest in a number of recent discoveries that are bringing commercial nuclear fusion closer and closer to being a reality. Nuclear fusion is one of the most powerful forms of energy production known to man--it’s what occurs naturally to power our sun and stars. Fusion is much cleaner than nuclear fission, the method used in conventional nuclear power production, because it only required hydrogen as fuel, not radioactive materials that leave radioactive waste that stays hazardous for tens of thousands of years, if not more. Fusion is also several times more powerful than fission. The problem is, while we have managed to create nuclear fusion reactions here on Earth, we haven’t been able to do it efficiently, with experiments consuming more energy to make the reaction happen than the reaction itself creates in almost all cases.

But while commercial nuclear fusion is still out of reach, we’ve gotten a whole lot closer in recent years. Last summer, ITER announced that they were, at the time, just [six and a half years away from achieving first plasma](https://oilprice.com/Alternative-Energy/Nuclear-Power/Nuclear-Fusion-Could-Be-A-Reality-By-2025.html) in their tokamak. Then, just a month later in August, 2019, Oak Ridge National Laboratory reported another breakthrough, which applies new[implementation of AI and supercomputing](https://oilprice.com/Energy/Energy-General/Is-This-The-Key-To-Commercial-Nuclear-Fusion.html) to successfully scale up nuclear fusion and manage plasma. In October of last year, the Los Alamos National Laboratory's Plasma Liner Experiment (PLX) [announced](https://www.eurekalert.org/pub_releases/2019-10/aps-mfe100919.php) their very science-fiction combination of plasma guns, magnets, and lasers in a hybrid approach to fusion that will be up and running later this year. Just last month, Australian startup HB11 began [snapping up patents](https://oilprice.com/Alternative-Energy/Nuclear-Power/The-Holy-Grail-Of-Clean-Energy-Is-Closer-Than-Ever.html) for their own laser approach to fusion.

Now, with the new discovery of a better hydrogen fuel source, commercial nuclear fusion is closer than ever, and the potential implications are impossible to overstate.

By Haley Zaremba for Oilprice.com

<https://oilprice.com/Alternative-Energy/Solar-Energy/US-Solar-Industry-Wants-Government-Bailout-As-Bankruptcies-Loom.html>

# U.S. Solar Industry Wants Government Bailout As Bankruptcies Loom

By [Haley Zaremba](https://oilprice.com/contributors/Haley-Zaremba) - Mar 30, 2020, 3:00 PM CDT

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Coronavirus is hitting the energy industry hard. First, it instigated a breakup between the OPEC+ countries of Saudi Arabia and Russia, leading to an oil price war which then led to a spectacular oil price crash. Now, the Permian Basin, once the site of an unparalleled shale boom, is[currently facing](https://oilprice.com/Energy/Crude-Oil/What-Happens-If-US-Shale-Goes-Bust.html) tens of thousands of layoffs. Then it[crushed biofuel markets](https://oilprice.com/Alternative-Energy/Biofuels/Oil-Crash-Could-Destroy-Global-Biofuels-Market.html) across the world. Now it’s hitting the renewable energy industry, and solar is begging for a bailout.  While Congress and the White House have finally come to a hard-won agreement on a $2 trillion coronavirus economic stimulus package, negotiated earlier this week, solar and wind did not receive the support they were looking for. “Although some democrats were pushing for solar and wind tax credit extensions to be included in the bill, it appears they didn’t make the final version,” reported[Solar Power World](https://www.solarpowerworldonline.com/2020/03/covid-stimulus-package-solar-relief/?fbclid=IwAR1MME0Y4W8-zMuPF65VN2yp0ZtZcJpSE8UivvRsuPJVEgfXtXpE246euSM). “Still, the solar industry will see some relief in the economy-wide measures included in the bill.”

President and CEO of the Solar Energy Industries Association Abigail Ross Hopper responded: “As Congress continues to address the ongoing COVID-19 crisis, we appreciate that they are prioritizing relief for families and small businesses. There are several elements in this legislation that can help solar businesses and solar workers, including long-term unemployment insurance, business loans and provisions that support employee retention and other employee protections. We will be working to help our members understand what resources are available to them as a result of this legislation and how they can use those resources to help get through this difficult time.

“As a result of this pandemic, the solar industry stands to lose half of our jobs — that’s 125,000 families who will no longer receive a paycheck. Congress can help stem this tide. Economic stimulus legislation can help our companies sustain families and invest tens of billions of dollars into the economy over the next couple of years. We remain committed to helping our economy recover from this pandemic. We fully expect to work with Congress on any broad economic stimulus package. This will ensure that when this awful chapter in America’s history comes to an end, the clean energy economy is well-positioned to lead our nation’s economic recovery.”

[**Related: How COVID-19 Could Spark The Next Recession**](https://oilprice.com/Energy/Energy-General/How-COVID-19-Could-Spark-The-Next-Recession.html)

President and CEO of the American Council on Renewable Energy (ACORE) also issued a statement echoing the urgency of saving the solar industry as so many other energy sectors are also taking a beating. “The renewable energy industry is fully supportive of broad measures to support the economy, protect workers, and ensure the health care system can effectively respond to the COVID-19 pandemic — which is precisely what the final Senate package is designed to do, he said. “When lawmakers turn their attention to measures aimed at bolstering specific sectors of the economy adversely impacted by coronavirus, we want to make sure they understand how supply chain disruptions and other pandemic-related delays are threatening the jobs of hundreds of thousands of workers in the renewable sector and the time-sensitive tax incentives on which renewable project financing depends. In the end, we’re all in this together and the renewable energy industry wants to be a key economic driver to help the nation through this downturn, as well as an effective climate solution over the long haul.”

The entire solar energy sector seems to be speaking out. In a letter signed by more than 550 solar companies across the United States, the solar industry is pleading with the federal government to provide support to the hundreds of thousands of people employed by the U.S. solar sector, according to[Energy Live News](https://www.energylivenews.com/2020/03/26/more-than-550-us-solar-firms-urge-congress-for-support-against-coronavirus/?fbclid=IwAR0KwaFjnWSHHL0b_hRCHNg1RjRdSEGhL81WsWl7MM9jGgmvxT_sNWGCRbQ).

Keeping the renewable energy sector afloat is essential and letting the solar sector go bankrupt or even shrink by any sizable margin would be a huge misstep at a moment that every economic decision the government makes is under a microscope.

By Haley Zaremba for Oilprice.com

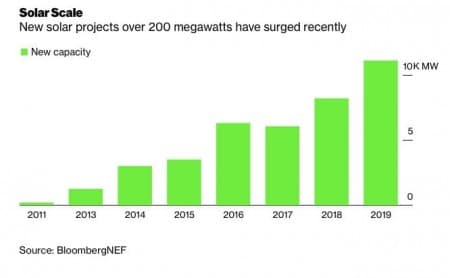
# China Could Start A New Solar Price War

By [Haley Zaremba](https://oilprice.com/contributors/Haley-Zaremba) - Mar 05, 2020, 3:00 PM CST

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The solar market is becoming supersized, with the size and scale of solar projects soaring and some of the biggest names in the tech industry getting behind the renewable energy boom. Despite the [high-profile](https://oilprice.com/Energy/Energy-General/Are-Large-Scale-Solar-Projects-Doomed-To-Fail.html) failure of the $1 billion Crescent Dunes solar plant developed by SolarReserve way out in the Nevada desert, which was going to be the biggest solar plant in the world, the solar industry is moving forward in its belief that, in most cases, bigger is better.

[](https://d32r1sh890xpii.cloudfront.net/tinymce/2020-03/1583435248-o_1e2m1gpfjd2vc93cikktv1cj18_large.jpg)

Along with the scale of these projects, investment in major solar developments is also growing, with the tech sector [leading the charge](https://oilprice.com/Alternative-Energy/Renewable-Energy/The-Big-Four-In-Tech-Are-Buying-Into-The-Renewable-Boom.html). As lead sustainability analyst at BNEF Jonas Rooze told PV Magazine, “corporations have purchased over 50 GW of clean energy since 2008. That is bigger than the power generation fleets of markets like Vietnam and Poland. These buyers are reshaping power markets and the business models of energy companies around the world.” Of those, “Google signed contracts to purchase over 2.7 GW of clean energy globally, followed by Facebook (1.1 GW), Amazon (0.9 GW) and Microsoft (0.8 GW).”

Now, [Bloomberg Green](https://www.bloomberg.com/news/articles/2020-03-04/china-solar-giants-get-bigger-as-glut-ignites-battle-for-share), a “new multiplatform editorial brand focused on climate change news, analysis, and solutions” which debuted in January, reports that “an aggressive expansion by the world’s biggest solar manufacturers is under way, spurring a battle for market share and push to cut costs that signal more pain ahead for the industry.” [**Related: Iraq Plans Production Surge In The Face Of New OPEC Cuts**](https://oilprice.com/Energy/Energy-General/Iraq-Plans-Production-Surge-In-The-Face-Of-New-OPEC-Cuts.html)

At the center of all this competition sits China. As the industrial center where the lion’s share of the components of solar cells and solar panels are manufactured, global expansion of the solar industry relies heavily on the nation. “China is by far the leader in the global solar supply chain, from the production of ingots to wafers, cells and panels,” says Bloomberg Green. “Of the top 10 cell makers for instance, nine are mainly Chinese companies. “Despite the havoc currently being wreaked on the Chinese economy by the COVID-19 coronavirus, however, top Chinese solar producers announced plans to significantly expand the sector.

China is determined to stay competitive; coronavirus be damned. As Robin Xiao, an analyst at CMB International Securities Ltd., told Bloomberg, these expansions are intended to “block rivals from adding new capacity.” According to this strategy, thirteen Chinese firms are to add a combined 40 gigawatts (at least) of yearly capacity “in ingots, wafers and cells each by the end of 2020, according to data from BloombergNEF.” However, this could have some negative unintended consequences, such as exacerbating the already problematic glut of photovoltaic products, which, in turn, could lead to price wars. “The plans were already in place before the coronavirus outbreak,” reports Bloomberg Green. “Companies tend to take a long-term view on expansions, and while growth in China is currently taking a hit as the world’s biggest market moves away from a reliance on subsidies, there are bets the global solar industry will see brighter days from next year through 2025.”

China is deciding to ramp up solar capacity in spite of the fact that domestic solar installations have dropped in the past two years, leading to what will more than likely be major overproduction in the short term. “The government is adopting a more market-oriented approach to ease its financial burden after years of subsidies that allowed the country to add more solar capacity than anywhere else in the world,” says Bloomberg Green. Experts expect a subsequent price war, followed by an acceleration of industry consolidation.

While China’s approach may seem overly optimistic, it would certainly be a good thing for more Chinese industry (as well as global industry) to make the switch over to renewable energy. With peak oil and the tipping point toward catastrophic climate change looming right around the corner, sometimes a little optimism is needed.

By Haley Zaremba for Oilprice.com

<https://www.bloomberg.com/news/articles/2020-03-04/china-solar-giants-get-bigger-as-glut-ignites-battle-for-share>

Green

# China Solar Giants Get Bigger as Glut Ignites Battle for Share

Bloomberg News

March 4, 2020, 4:03 AM GMT+1



Top Chinese producers are pursuing aggressive expansion plans



Strategy could result in price wars in wafers and cells: CMBI

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An aggressive expansion by the world’s biggest solar manufacturers is under way, spurring a battle for market share and push to cut costs that signal more pain ahead for the industry.

Top Chinese producers of solar parts have announced expansion plans in recent weeks even as the industry grapples with the threat of the coronavirus outbreak on global renewable energy [deployment](https://www.bloomberg.com/news/articles/2020-02-27/coronavirus-is-starting-to-slow-the-solar-energy-revolution).

The expansions are part of a strategy, especially of larger companies, “to block rivals from adding new capacity,” said Robin Xiao, an analyst at CMB International Securities Ltd. This could worsen an oversupply of photovoltaic products and lead to price wars, he added.

The plans were already in place before the coronavirus outbreak. Companies tend to take a long-term view on expansions, and while growth in China is currently taking a hit as the world’s biggest market moves away from a reliance on subsidies, there are bets the global solar industry will see [brighter days](https://www.bloomberg.com/news/articles/2019-12-05/china-s-worst-solar-days-seen-over-as-capacity-is-set-to-soar) from next year through 2025.

China is by far the leader in the global solar supply chain, from the production of ingots to wafers, cells and panels. The industry is dominated by several major manufacturers including LONGi Green Energy Technology Co., Tongwei Co., JA Solar Technology Co. and JinkoSolar Holding Co. Of the [top 10](https://www.bnef.com/core/data-hubs/1/1?tab=Company%20View) cell makers for instance, nine are mainly Chinese companies.

Thirteen Chinese firms led by the top suppliers plan to add at least 40 gigawatts of annual capacity in ingots, wafers and cells each by the end of 2020, according to data from BloombergNEF.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CAPACITY (GW)** | **2018** | **2019** | **2020** | **Y/Y CHANGE IN 2019** | **Y/Y CHANGE IN 2020** |
| Ingot | 165 | 167 | 211 | 2 | 44 |
| Wafer | 183 | 215 | 255 | 32 | 40 |
| Cell | 168 | 198 | 244 | 30 | 46 |
| Panel | 219 | 265 | 290 | 46 | 25 |

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Manufacturers are boosting capacity to decrease per-unit costs, maintain their market share and keep competition at bay, said BNEF analyst Jiang Yali. This strategy is driven by a persistent oversupply in the sector, and rising investments in new technology could drive older and smaller factories out of business, she added.

A Tongwei official said in a response to Bloomberg that solar power capacity will rise in the future as it becomes “superior” to traditional fossil fuels in terms of costs and environmental benefits.

### ‘Inevitable Result’

“Overcapacity is an inevitable result of a market economy,” according to the Tongwei official. “There is room for consolidation in the industry” as some high-cost capacity is due to withdraw from within and outside of China.

LONGi said its “relatively aggressive” expansion is underpinned by its confidence in the sector’s development, as well as its own technology and cost advantage. “If we’re not leading, we’re not expanding,” the company said, adding that its products are in short supply in the market.

JA Solar didn’t respond to a request for comment.

China’s solar installations slumped in the past two years, reaching [30 gigawatts](https://www.bloomberg.com/news/terminal/Q6EPJEDWRGG6) in 2019 from 44 gigawatts the year before and a record 53 gigawatts in 2017. The government is adopting a more market-oriented approach to ease its financial burden after years of subsidies that allowed the country to add more solar capacity than anywhere else in the world.

As demand falters and supply ramps up, the industry might experience more pain in the short term. A price war could emerge in the second and third quarters for monocrystalline wafers and cells, which are more efficient products and where the bulk of capacity additions are seen, said CMBI’s Xiao. Cell prices have already halved in the past two years, BNEF data show.

Industry consolidation could also accelerate. Data from China’s leading industry group show the five biggest solar cell makers accounting for almost 38% of domestic production in 2019, an increase of 8.4 percentage points from the previous year.

### Further Ahead

Over the longer term, Chinese state-back researchers are projecting a [steady climb](https://www.bloomberg.com/news/terminal/Q210KDT0AFB4) in total capacity to more than 500 gigawatts by 2025 from 204 gigawatts at the end of last year. Annual capacity additions are seen at 50 gigawatts in 2021, which could then increase 10% every year through 2025, Trina Solar Ltd. Chairman Gao Jifan said in December.

Supporting that optimism is a government policy that promotes the consumption of clean power, and technological innovations that have sped up the cost reduction of renewable energy.

Here are some expansion plans announced in the past few months:

* [Tongwei](https://www.bloomberg.com/news/terminal/Q5L227T0AFB4) will invest in a solar cell factory that will help raise its annual capacity to 60 gigawatts from a target of at least 30 gigawatts by the end of this year.
* [JA Solar](https://www.bloomberg.com/news/articles/2020-01-02/ja-solar-plans-947-million-cell-and-panel-production-plants)plans to build a 10-gigawatt cell plant and a 10-gigawatt module plant in China’s eastern Zhejiang province.
* [LONGi](https://www.bloomberg.com/news/terminal/Q5KW62DWRGG5) will build a 10-gigawatt solar cell project in the city of Xi’an; it also plans to [buy](https://www.bloomberg.com/news/terminal/Q66TNODWLU6H) a Vietnam-focused company to expand production of photovoltaic cells and panels in the Southeast Asian country.

The solar value chain starts from the production of polysilicon and subsequently, ingots, wafers and cells. A panel, or module, is a collection of cells connected to one another.

“Oversupply is very likely to be the theme of the market in the next few years,” said Sun Xiaojing, an analyst at Wood Mackenzie Ltd. “This should be a worrying trend for manufacturers, especially those who have not upgraded their capacity to make newer high-efficiency modules.”

— With assistance by Feifei Shen

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Climate Adaptation

# What Links Coronavirus and Climate Change: Lack of Preparation

The spread of the virus has a lesson for how we tackle climate change.

By

[Akshat Rathi](https://www.bloomberg.com/authors/AUdOobfNzkQ/akshat-rathi)

April 7, 2020, 12:01 PM GMT+2



A dog and its owner on Ipanema Beach, Rio de Janeiro, Brazil, on April 2.

 Photographer: Dado Galdieri/Bloomberg

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3:39

[Sign up to receive](http://bit.ly/bbg-green) the Green Daily newsletter to get climate coverage in your inbox every weekday.

Turn back the clocks a few months. It’s September 2019. The World Bank and the World Health Organization have together put out a new report on [pandemic preparedness](https://apps.who.int/gpmb/assets/thematic_papers/tr-4.pdf).

“Few natural hazards threaten more loss of life, economic disruption, and social disorder than large-scale disease outbreaks,” the report said. But the world is under-investing in forward planning “despite evidence that suggests more attention to preparedness would be cost effective.”

Between 1997 and 2009 zoonotic outbreaks—pathogens crossing over from animals to humans—that did not become pandemics cost the world economy $6.7 billion each year. Pandemics cost a lot more. A new influenza-type outbreak on the scale of the 1918 pandemic could cost as much as $3 trillion, or about 5% of global economic output, the joint World Bank-WHO panel [projected](https://apps.who.int/gpmb/assets/annual_report/GPMB_annualreport_2019.pdf).

The cost of preparing against the threat would be a mere $3.4 billion each year. In other words, the report concluded, every $1 spent on preparation would yield at least $2 in economic savings—and potentially a lot more if it curbs a pandemic. Much of the money will be spent strengthening health infrastructure in poor countries, which could help alleviate poverty because infectious diseases disproportionately affect the poor. All that is, of course, secondary to avoiding the grief of losing countless lives.

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Covid-19 has already [claimed](https://www.bloomberg.com/graphics/2020-coronavirus-cases-world-map) more than 70,000 lives, with the worst expected to come. The novel coronavirus is not as transmissible as influenza, but none of us have any form of immunity to it. Early estimates of the cost to the global economy range from [$1 trillion](https://news.un.org/en/story/2020/03/1059011) to [$4 trillion](https://www.bloomberg.com/news/articles/2020-04-03/global-cost-of-coronavirus-could-reach-4-1-trillion-adb-says).

If the world had spent adequately on preparing, a lot of that pain could have been avoided. It’s a lesson worth heeding when tackling the other crisis that hasn’t gone away: climate change.

Also in September 2019, the World Bank participated in the publication of a [different report](https://www.bloomberg.com/news/articles/2019-09-09/the-massive-cost-of-not-adapting-to-climate-change) on preparing against climate change. It found that spending $1.8 trillion in the coming decade on climate-friendly measures would generate $7.1 trillion in economic benefits. In November 2019, the Economist Intelligence Unit found that, if the world doesn’t do more to cut emissions, the economic cost could be as much as [$7.9 trillion each year](https://www.japantimes.co.jp/news/2019/11/20/world/science-health-world/climate-cost-trillion-2050/) by the middle of the century.

Covid-19 and climate change are different types of crises. The pandemic will be over within years and a single technological solution (vaccines) can bring it to a halt sooner. Climate change will cause devastation for decades to come, even if we start cutting emissions, and it cannot be solved with technology alone.

Despite the differences, both crises pit humans against fundamental laws of nature. Because we understand physics, chemistry, and biology so well, we are granted the advantage of foresight. We may have thrown away some of that advantage in controlling the spread of coronavirus, but that only means there [isn’t much room](https://www.bloomberg.com/news/articles/2020-04-01/cost-benefit-analysis-in-the-time-of-coronavirus-and-climate-change?sref=HOPZPtg9) for excusing continued climate inaction. (In another unfortunate twist, like most large events this year, the pandemic [has delayed](https://www.bloomberg.com/news/articles/2020-04-06/what-it-means-to-have-a-year-without-climate-diplomacy?sref=HOPZPtg9) the annual UN climate conference, which coordinates the world’s response to the climate crisis.)

“Preparedness is a choice,” said Jeremy Konyndyk, senior policy fellow at the Center for Global Development, who worked on a pandemic playbook for the US government under former President Barack Obama. “The decision not to prepare in the face of an obvious threat is no excuse when you find that threat is overwhelming later on.

<https://www.iea.org/commentaries/the-coronavirus-pandemic-could-derail-renewable-energy-s-progress-governments-can-help>

# The coronavirus pandemic could derail renewable energy’s progress. Governments can help.

[Heymi Bahar, Senior analyst - Renewable Energy Markets and Policy](https://www.iea.org/authors/heymi-bahar)Commentary — 4 April 2020

As the world deals with an unprecedented global health crisis, the economic shock waves have rippled through the renewable energy sector, threatening to derail its progress.

Renewable technologies such as wind and solar PV have experienced spectacular growth over the past two decades, creating whole new global industries and helping avoid significant amounts of greenhouse gas emissions. Even faster deployment of renewables will be vital if the world is to meet its climate goals and other long-term sustainable energy objectives. But without government action, the crisis caused by the coronavirus (COVID-19) could considerably disrupt their momentum.

How the situation affects renewables will depend on two key areas: the duration of confinement and social-distancing measures in different countries, and the scope and timing of economic stimulus packages in response to the economic downturn.

Falling costs and strong policy support have made renewables increasingly attractive and competitive in many economies, but they now face three main challenges from the coronavirus crisis: supply chain disruptions that can lead to delays in completing projects; the risk of being unable to benefit from government incentives that end this year; the likely decrease in investment because of pressure on public and private budgets combined with uncertainty over future electricity demand.

More than ever, governments will be central in tackling these challenges and determining the pace of deployment of renewables in the near future. Economic stimulus packages aimed at getting the global economy back on track will be particularly important. When designing these packages, governments should bear in mind the structural benefits that renewables can bring in terms of economic development and job creation while also reducing emissions and fostering technology innovation.

#### As the world deals with an unprecedented global health crisis, the economic shock waves have rippled through the renewable energy sector, threatening to derail its progress.

In October 2019, several months before the scale of the coronavirus pandemic emerged, [the IEA forecast](https://www.iea.org/reports/renewables-2019) that 2020 would be a record year for renewable electricity additions. Global installations of solar PV and wind were set to outpace 2018 levels by over 20%. Renewable policies in China, the European Union, the United States and India were expected to drive this rapid expansion.

However, in several key markets that have been considerably affected by the coronavirus crisis, major incentives to invest in renewable projects are set to expire at the end of 2020. In China and the United States, developers have to connect wind and solar PV projects by the end of December in order to qualify for expiring incentives. In the European Union, 2020 is a milestone year for member states to reach binding renewable energy targets. And in India, the financing and deployment of renewable projects need to accelerate this year to reach the country’s ambitious policy targets by the deadline of March 2022.

#### This was meant to be an outstanding year for renewables

Factories in China manufacture about 70% of the global supply of solar panels. Another 10% to 15% of it comes from Chinese companies operating in Southeast Asia. In February, solar PV manufacturing facilities in China paused or reduced production because of coronavirus-related lockdowns in several key provinces. At the same time, most plants in Southeast Asia, India and the United States remained open. Despite some shipment delays, the solar PV supply chain in China is now ramping up production again, with most factories slowly resuming activities by taking necessary health precautions.

The wind energy supply chain, on the other hand, is much more globally interconnected compared with solar PV. Europe is a major manufacturing hub for wind turbines, and European factories initially experienced disruptions to the supply of parts coming from China in February. Manufacturing facilities in Italy and Spain have been closed since mid-March due to strict confinement measures. In addition, the recent lockdown in India required most non-essential manufacturing facilities – including wind turbine and solar PV component manufacturers – to close until mid-April. The effects are already being felt in the United States where multiple projects have received “force majeure” notices from suppliers warning developers about possible delivery delays. Uncertainty over the timing and impact of potential lockdown measures in other countries could further delay the completion of many projects worldwide.

#### Some renewable technologies are more vulnerable than others

The impact of the pandemic is also slowing down construction activity on renewable projects. Lockdown measures in multiple European countries, India and some US states require non-essential workers to stay at home. This will further affect developers who need to complete utility-scale renewable projects by the end of 2020 to meet contractual obligations under policy programmes. In China, all wind projects need to be commissioned by the end of 2020 in order to qualify for feed-in tariff subsidies. In the United States, wind developers are in a similar situation, as they are required to ensure projects are operational by 2020 to receive production tax credits. Any delay in components or construction puts companies at risk of missing these deadlines and thus important financial incentives.

Large developers with strong cash positions may be able to handle these construction delays or additional costs they incur in the short and medium term. However, the situation remains more uncertain for small project developers with less cash at their disposal. For them, delays may require the restructuring of existing debts. Ensuring adequate access to low-cost debt and other financing mechanisms will be key to ensuring that developers can maintain operations now and in the long term.

Finally, renewable projects require multiple meetings to take place in person at both the government and community levels. Various stages of a project’s development, including securing permits and acquiring land, requires significant human interaction. With multiple government offices and energy agencies shut down around the globe, permitting processes will be delayed unless a coordinated online system that spans multiple authorities is made available. Meanwhile, social acceptance of renewable energy projects has been a key challenge worldwide. Engaging with local communities before and during renewable energy project development has been vital to getting power plants up and running on time. Current social-distancing measures have made it harder for developers to reach these key constituents. These delays, both administrative and social, are bound to have a direct impact on projects that are due to be commissioned in 2020 or 2021.

#### The crisis may disrupt the deployment of renewables

Large utilities and independent power companies are not the only entities investing in renewable energy. Last year, an estimated one-fifth of all renewable capacity deployed globally consisted of individuals and small-to-medium-sized enterprises installing solar PV panels on their roofs or business sites. Such decentralised installations – known as distributed solar PV – accounted for over 40% of global solar PV deployment last year.

With costs falling, the installation of distributed solar PV provides reasonable returns in many countries, but investment in it is now at risk. Currently, the installation of distributed solar PV has stopped in many countries because of lockdown measures preventing access to the buildings. Households and small businesses facing financial shocks and economic uncertainty may postpone or abandon their plans to install solar PV on their property.

#### Distributed solar PV could take the biggest hit

Renewables are a fundamental element of the global economy today, powering almost 30% of global electricity use. They reduce carbon dioxide (CO2) emissions and air pollution, and improve energy security. The renewable energy industry is a significant global employer, as well as a key source of new investment and innovation for clean energy transitions. In an increasing number of countries, the costs of generating electricity from hydropower, wind and solar PV are now comparable to or lower than those from newly built fossil-fuel alternatives.

Considering the unprecedented economic impact of the coronavirus crisis, the growth of renewable capacity additions this year may very well slow down for the first time in history. However, governments have the ability to change this trajectory with targeted policies that can enable renewables to grow sustainably in the coming years.

Right now, policy makers are naturally focused on dealing with the huge public health challenges created by the coronavirus pandemic and taking the necessary measures to prevent a widespread financial crisis. They are also stepping in to try to urgently address the rapid spread of economic difficulties affecting households and businesses. As governments continue to work on repairing the economic damage and spurring renewed activity in the week and months ahead, there are a number of actions that can achieve these goals while also helping the deployment of renewable energy.

First, policy makers can extend deadlines for commissioning projects beyond 2020 in order to account for delays due to supply chain disruptions or labour constraints. This will enable renewable project developers to avoid financial penalties that may weaken their financial situation in a difficult economic context while allowing them to keeping previous incentives for which they had qualified.

Second, governments can include specific financing measures and incentives for renewable projects in upcoming stimulus packages. These should focus on reducing the risks for capital-intensive utility-scale solar PV and wind projects under dire macroeconomic conditions, especially for small developers. This will require the continuation and extension of existing policy measures that have shown they can accelerate cost-effective deployment. Additional economic incentives such as tax credits, investment grants and specific loan schemes would be necessary to maintain demand for the highly vulnerable distributed solar PV sector. These incentives can be combined with energy efficiency policies.

Third, short-term policy actions on renewables should align with a new medium- and long-term visions that aim to achieve a rapid peak in greenhouse gas emissions this decade and a steep decline thereafter. Renewables and energy efficiency will play the leading roles in advancing clean energy transitions, but they need a continued and coherent long-term policy vision. In that sense, stimulus packages should also channel funds to new renewable energy technologies that are not fully commercialised but have significant cost reduction potential, such as floating offshore wind farms, marine technologies and low-carbon hydrogen production.

Stimulus packages also give countries a unique opportunity to prepare the world’s electricity infrastructure for a future that will require strong grids and greater sources of flexibility to accommodate increasing shares of variable renewables such as wind and solar PV.

The coronavirus pandemic poses a significant threat to the timely deployment of renewables and their vital contribution to clean energy transitions. But governments can enable these technologies to emerge from the crisis with renewed momentum and play an important role in the global economic recovery.

Oilprice.com

# The Oil Price Crash Could Trigger A Geothermal Energy Boom

By [Tsvetana Paraskova](https://oilprice.com/contributors/Tsvetana-Paraskova) - Apr 13, 2020, 4:00 PM CDT

<https://oilprice.com/Alternative-Energy/Geothermal-Energy/The-Oil-Price-Crash-Could-Trigger-A-Geothermal-Energy-Boom.html>

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‘Geothermal is America’s untapped energy giant,’ the U.S. Department of Energy said in a [report](https://www.energy.gov/sites/prod/files/2019/06/f63/0-GeoVision-ExecSummary-v2-opt_0.pdf) last year, highlighting in its analysis that this kind of “always-on” flexible renewable energy resource could grow 26-fold to generate 8.5 percent of U.S. electricity by 2050.

Unlike wind and solar, [geothermal energy](https://oilprice.com/Energy/Energy-General/The-Infinite-Energy-Resource-Were-Overlooking.html) is a 24/7 energy resource, but the technologies to explore and drill for resources and build facilities make geothermal energy more expensive than other renewables.

Technology improvements and cost cuts in geothermal energy could come from what some would think is a most unexpected source—the oil industry, analysts and geothermal specialists say.

The oil price crash is already [hurting the oil industry](https://oilprice.com/Energy/Energy-General/Is-This-The-Most-Destructive-Oil-Price-Crash-In-History.html), and it is set to hurt oilfield services providers even more, as U.S. exploration and production companies jammed on the brakes and announced 20-30 percent cuts in capital spending.

It could be those services companies specialized in oil and gas drilling that could help geothermal development with their expertise in drilling in the ground, according to Tim Latimer, co-founder of geothermal assets developer and operator Fervo Energy.

The geothermal supply chain significantly overlaps with oil and gas, because geothermal development initially consists of drilling wells into hot areas to produce steam, Latimer said in a [Twitter thread](https://twitter.com/TimMLatimer/status/1244641415419899910) after oil prices crashed and oil industry players began announcing cost and capex cuts en masse.

“As much as 50% of the cost of geothermal comes from drilling, so a plunge in oil prices can drop costs dramatically,” Latimer said.

According to the executive, rig count could be a proxy for the cost impact. The U.S. rig count has been [collapsing](https://oilprice.com/Energy/Energy-General/Rig-Count-Collapse-Continues-Despite-Historic-Global-Oil-Deal.html) in recent weeks as producers idle rigs at an unprecedented pace.

“In the last crash US Rig Count fell rapidly to below 400. This one will be even deeper. As a result, oil field services costs will likely drop 20-40% or more,” Latimer says.

A drop in costs could be a key incentive for geothermal development, alongside optimizing permitting timelines, DOE says in its GeoVision analysis.

Geothermal resources in the U.S. are enormous, but geothermal energy accounted for just 0.4 percent of total utility-scale electricity generation in the United States in 2019, according to [EIA data](https://www.eia.gov/energyexplained/geothermal/use-of-geothermal-energy.php). Globally, America leads in geothermal electricity generation, but on a U.S. scale, geothermal is a negligible part of total electricity generation.

According to DOE, this could change, and geothermal could end up generating 8.5 percent of all U.S. electricity and account for 3.7 percent of total U.S. installed capacity in 2050, if costs drop significantly and if technology continues to improve.

The oil price crash and the expected reduction of drilling costs could reduce geothermal energy costs, Fervo Energy’s Latimer argues.

“The drop in oil field services costs alone may send geothermal costs lower by 20% or more,” he said.

Lower drilling costs for geothermal, combined with lower interest rates and the retroactive revival and extension of the full Production Tax Credit (PTC) for geothermal facilities from December 2019, could lead to a 20 to 30-percent decline in geothermal from the $65-75/MWh at the start of this year, Latimer says.

Not only can geothermal energy benefit from lower drilling and development costs, but it could benefit from increased interest from the oil and gas sector in geothermal development.

“Oil and gas has the funding and capability and knowhow to quickly advance technology and deployment of geothermal,” Kate Young, the geothermal program manager at the National Renewable Energy Laboratory, told [Grist](https://grist.org/energy/as-oil-crashes-americas-untapped-energy-giant-could-rise/) last week.

On the other hand, oilfield services, which are already suffering in this oil price collapse, could benefit from geothermal—this could be their way out, according to Latimer.

“This downturn will likely send the rig count into the 200s, so geothermal development at 100+ rigs could put as much as a third of the oil field sector back to work developing a 24/7 clean energy resource,” says the geothermal energy executive, noting that “100% clean energy just got a lot more possible in a way that will also put the oil field back to work.”

# Europe's Largest Economy Is Betting Big On Hydrogen

By [Vanand Meliksetian](https://oilprice.com/contributors/Vanand-Meliksetian) - Feb 17, 2020, 12:00 PM CST

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The energy transition is a herculean challenge that is being thwarted by the world’s addiction to fossil fuels. Fortunately, the IEA had some [good news](https://phys.org/news/2020-02-carbon-emissions-energy-flat-iea.html) recently when it announced that CO2 emissions in 2019 did not increase compared to 2018 while the world economy grew by 3 percent. The unexpected stabilization is primarily the result of the rapid growth of renewables and the substitution of coal by natural gas. The biggest contributor to the reduction of CO2 emissions is the EU, with a decrease of 5 percent. Germany’s share was the largest of the OECD countries with a decrease of 8 percent.

The political momentum is on the side of [Green parties](https://www.theguardian.com/commentisfree/2019/jun/24/german-greens-rise-nation-divided) which have seen solid growth over the years in most of the EU but especially in Germany. The energy transition in Europe’s largest economy, therefore, is just getting started. The Ministry of Economy has produced a draft report where the development of a hydrogen economy is essential for a carbon-neutral society by 2050.

The impressive growth of renewables in Germany is a major boon for the fight against climate change. However, the infrastructure is not designed for decentralized energy production which is a significant challenge. Also, intermittency of wind and solar power is a serious obstacle for reliable and continued energy supply.

Hydrogen could be the solution. The German [plan](https://www.energy-reporters.com/storage/germany-eyes-hydrogen-to-replace-nuclear-and-coal-energy/) is to develop a value chain including production, storage, transportation, and consumption. The potential is there, now sound policies need to maintain the right environment for the private sector to develop the necessary innovations.

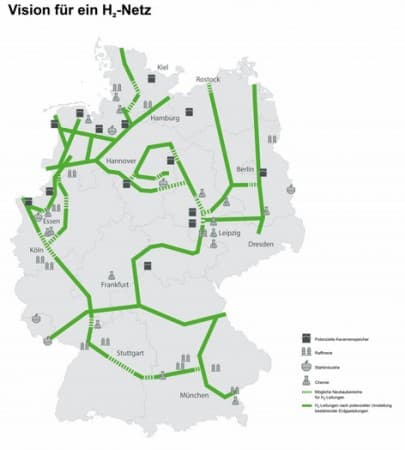
**Hydrogen’s necessity**

The energy transition will be a success by 2050 when Europeans can consume energy from a stable grid without emitting CO2. Two major challenges lay ahead. First, sufficient production capacity needs to be installed to replace the carbon economy. Second, the problem of storage and stabilization of the grid needs to be overcome.

While the former is merely a matter of sufficient investments in alternative production methods, the latter is more difficult. The ability to mass produce electrolyzers, for example, is a necessity to reducing cost. Therefore, innovative solutions are essential for the development of a hydrogen economy.[**Related: The Metal Trump Wants More Than Gold**](https://oilprice.com/Energy/Energy-General/The-Metal-Trump-Wants-More-Than-Gold.html)

The Ministry proposes the production of 5 GW of hydrogen by 2030 for the transportation sector, industry, and heating homes. Also, the network of filling stations needs to be expanded to make fuel cell vehicles more attractive to consumers.

The organization representing Germany’s gas grid operators (FNB Gas) has proposed a hydrogen grid of 5,900 km running along the existing natural gas network for 90 percent. This would allow the reusing of the existing infrastructure once hydrogen consumption and production takes off while natural gas decreases. [According to FNB Gas chair Ralph Bahkev](https://www.rechargenews.com/transition/-germany-will-need-to-import-hydrogen-on-a-large-scale/2-1-746331), “our aim is to make the existing gas infrastructure usable for the transport of hydrogen.”

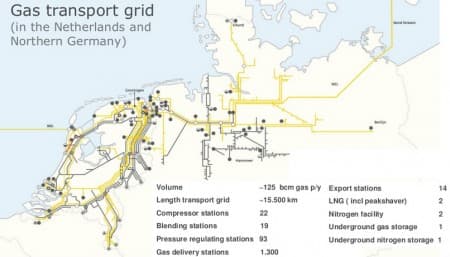
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**Collaboration and alignment**

The Dutch economy is strongly dependent on the German ‘hinterland’. The excellent infrastructure connection between the two countries has propelled the Port of Rotterdam's growth where the majority of goods moving through Europe's largest harbor are sent to [Germany](https://www.cbs.nl/en-gb/news/2018/36/half-of-goods-from-rotterdam-have-foreign-destination). Besides logistics, the Netherlands and Germany also share a sophisticated gas infrastructure network.[**Related: Russia Doubles Down On Its Arctic Ambitions**](https://oilprice.com/Energy/Energy-General/Russia-Doubles-Down-On-Its-Arctic-Ambitions.html)

The discovery of Europe’s largest single gas field in Groningen in 1960 spurred a construction boom that led to one of the world’s most complex pipeline infrastructures’ spanning northwest Europe. The political decision in the Netherlands to halt gas extraction due to tremors in the Groningen area has led to a strong interest for hydrogen initiatives where the soon to be idle gas network can be utilized for.

The Dutch are developing [’Hydrogen Valley](https://newenergycoalition.org/hydrogen-valley/)’ in Northern Netherlands, which is a public-private initiative that connects 30 individual projects. The goal is to develop a hydrogen economy on a small scale including production, storage, transportation, and consumption. The alignment of interests is also creating a need for collaboration between the European neighbors.

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The Dutch and German federal governments and the German state of North Rhine-Westphalia are jointly investigating the [integration](https://www.windpowermonthly.com/article/1672522/german-dutch-hydrogen-feasibility-study-launched) of the countries’ future hydrogen economies. The Netherlands has an elaborate gas infrastructure that is already connected with Germany. Also, surplus energy from existing and future wind farms in the North Sea could be used to produce hydrogen. The energy could then be transported through the Dutch gas infrastructure to customers. This would save billions of euros  
necessary for the extension of the power grid.

The Dutch and German societies share a highly motivated, ‘green’ population that is willing to go the extra mile when it comes to the energy transition. Also, strong economic complementarity and existing assets, such as the shared gas infrastructure, are an opportunity to develop the world's first hydrogen-based economies. Much depends on sustained government support and sound policies to create the right environment for innovation to thrive.

By Vanand Meliksetian for Oilprice.com

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# Offshore Oil Could Soon Be Powered By Wind

By [Irina Slav](https://oilprice.com/contributors/Irina-Slav) - Apr 13, 2020, 3:00 PM CDT

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Longer blades, taller towers, more powerful turbines: wind energy seems to be past the peak of innovation now, improving incrementally rather than with breakthrough. And yet none other than an oil company has ventured into a new field with massive potential: floating offshore wind.

The Norwegian petroleum ministry earlier this month approved a plan by Equinor to build and operate a floating offshore wind farm in the North Sea that will supply power to as many as five oil and gas platforms. The project is the first of its kind, but it would have significant implications both for offshore oil and gas and for offshore wind.

The facts: the Hywind Tampen wind farm, 140 km off the Norwegian coast, will have a total capacity of 88 MW with 11 turbines that will meet around 35 percent of the electricity needs of the two Snorre platforms and the three Gullfaks platforms. However, Equinor says that "In periods of higher wind speed this percentage will be significantly higher."

The $490-million (5 billion kroner) project will reduce the use of gas turbines for power generation, consequently lowering the emissions of carbon dioxide from the five platforms by some 200,000 tons annually and emissions of nitrous oxides by 1,000 tons.

That's certainly a sizable undertaking. It is unlikely to score Equinor many green points since the power generated by the wind farm will be used for extracting oil and gas from the bottom of the sea, but this is not the only purpose of the project.

According to Equinor, the Hywind Tampen wind farm will also be a test site for future offshore wind installations.

[**Premium: Missiles Fired In Iraq As Proxy War Heats Up**](https://oilprice.com/Energy/Energy-General/Missiles-Fired-In-Iraq-As-Proxy-War-Heats-Up.html)

"The Hywind Tampen project will contribute to further developing floating offshore wind technology and reducing the costs of future floating offshore wind farms, offering new industrial opportunities for Norway, the licences and Norwegian supplier industry in a growing global offshore wind market," Equinor said on its website.

The global offshore market is indeed growing. A recent [report](https://www.woodmac.com/news/opinion/why-offshore-wind-will-attract-more-than-us%24211-billion-between-2020-and-2025/) from Wood Mackenzie said investments in offshore wind over the next five years could exceed $211 billion as investors move their focus from oil and gas to wind power. What's more, the investment gap between offshore wind and offshore oil and gas will narrow, with capital expenditure in offshore wind rising to top $200 billion in the period.

"Offshore wind projects are changing; the offshore wind supply chain will have to change with it," the Wood Mac analysts wrote. "The number of project interfaces – the supply deals associated with a project – is both broadening and decreasing, while the size of projects and contracts is growing."

Offshore wind carries lower returns for investors but also lower risk, the report's authors also noted. Typically, there would be many investors opting for higher returns over low risk. Still, with two oil market crashes in six years, it may be safe to say that a growing number of investors would now prefer the low risk associated with wind power over the higher—but uncertain—returns of oil and gas.

What's more, investors have been paying attention to what has been happening around the world in terms of changing sentiments towards oil and gas, and the push to arrest rising global average temperatures. Wood Mac is calling this energy transition risk, and this risk is present in oil and gas investments but absent in wind power projects, hence the greater interest.

The fact that Equinor is far from alone in its renewables push is indicative enough that the oil and gas industry, or at least part of it, has done its homework and is following investors in their changing attitudes.

[**Premium: U.S. Oil Production Has Already Peaked**](https://oilprice.com/Energy/Energy-General/US-Oil-Production-Has-Already-Peaked.html)

Shell, for example, has a [small but growing](https://www.shell.com/energy-and-innovation/new-energies/wind.html) presence in wind power, both offshore and onshore. The company has a stake in two projects in the Netherlands, one in operation and one in construction, and it is also a 50-percent shareholder in the Atlantic Shores project: a 2.5 GW offshore wind farm in New Jersey.

French Total is also [betting big](https://www.total.com/energy-expertise/exploration-production/renewable-energies/solar-energy-and-wind-energy) on renewables. The company eyes some 25 GW in renewable power generation capacity by 2025. To achieve this, Total has been expanding in the industry through acquisitions. It now has a presence along the supply chain and is further expanding it. Recently, Total [joined](https://www.rechargenews.com/wind/oil-giant-total-dives-into-offshore-wind-with-worlds-biggest-floating-array/2-1-776916) the Erebus offshore wind project: a floating wind farm off the Welsh coast that will have a capacity of close to 100 MW.

Floating wind farms may well be the future: sooner or later, free space onshore and in shallow waters will run out, but the energy demand of a growing human population will continue to rise. Whether it starts as a way to reduce offshore oil and gas platforms' reliance on gas turbines for electricity, it will inevitably progress further than that. The great thing about it? Floating wind turbines are built in relatively deep water, where there is rarely a shortage of wind. This means they wouldn't need energy storage facilities, which are now becoming mandatory for the approval of some onshore wind and solar projects.

By Irina Slav for Oilprice.com

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# The Ocean Could Be The Ultimate Renewable Energy Source

By [Alex Kimani](https://oilprice.com/contributors/Alex-Kimani) - Apr 02, 2020, 7:00 PM CDT

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For all their hype as the biggest and final frontier in clean energy production, tidal and wave power have never quite lived up to their potential. The IEA estimates that we harnessed[just 1.2TWh of energy](https://www.iea.org/reports/tracking-power-2019/ocean-power) from the world’s vast oceans in 2018--a minuscule fraction of the ~170,000TWh in global primary energy consumption.  This sad situation is not for lack of trying, though.

More than 70 companies have[developed](https://setis.ec.europa.eu/system/files/2014%20JRC%20Ocean%20Energy%20Status%20Report.pdf) various technologies to generate electricity from ocean tides or the kinetic power of waves, leading to [global ocean energy production rising tenfold](https://www.esi-africa.com/industry-sectors/renewable-energy/ocean-energy-production-surges-tenfold-over-last-decade/) over the last decade. Yet, most never advance past the pilot stages into full commercialization.

The sad tale of the leader in the space, Ocean Power Technologies Inc (NASDAQ: OPTT), serves as a sobering reality of the enormous challenge of turning an interesting science project into a profitable business venture. Ocean Power--a company mostly kept alive by government largesse--has crashed 99% over the past three years as it threatens to join the trash heap of tech companies that have experienced more false dawns than Groundhog Day.

But some experts now believe that the time for a Blue Energy revolution has come and new developments in the space could flip the script.

The [Ocean Energy Systems](https://www.ocean-energy-systems.org/) (OES), an offshoot of the[International Energy Agency](https://www.iea.org/), has been working round the clock to pool all the research it can in a bid to achieve large-scale ocean power deployment in the near future.

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Source: CNN Money

**Riding the Tidal Wave**

The 24-member OES, including the U.S., China, most E.U. nations, and India, believes ocean power has the potential to become the Holy Grail of renewable energy due to its sheer potential.

The International Renewable Energy Agency (IRENA), an organization that promotes the widespread adoption and sustainable use of all forms of renewable energy, reckons ocean power has the [potential to generate more electricity](https://www.irena.org/documentdownloads/publications/wave-energy_v4_web.pdf) than either solar or wind power.

According to IRENA, 2% of the world’s 800, 000 kilometers of coastline exceeds a wave power density of 30 kilowatts per meter (kW/m), with an estimated global technical potential of about 500-gigawatt electrical energy (GWe) based on a conversion efficiency of 40%. In other words, by just utilizing 2% of our coastlines, we can generate 4,383TWh of ocean power annually, enough to meet 16.4% of the world’s electricity needs. The U.K. and U.S. have said ocean energy could [provide 20 and 15% of their electricity consumption](https://www.technologyreview.com/s/537656/why-hasnt-tidal-power-taken-off/), respectively.

[**Related: What Happens If You Can’t Pay Your Electricity Bill?**](https://oilprice.com/Energy/Energy-General/What-Happens-If-You-Cant-Pay-Your-Electricity-Bill.html)In comparison, all renewable sources combined accounted for ~11% of the United States’ energy consumption in 2018.

Despite the vast potential, only Scotland currently generates any meaningful amounts of ocean power.

Scotland has enormous potential thanks to its impressive archipelago of islands with heavy tidal currents that can be easily tapped. Located in the Northern territory of the U.K., the nation now boasts the largest tidal array of underwater turbines in the world. Scotland’s tidal turbines have even exceeded expectations, with[the MeyGen company](https://simecatlantis.com/projects/meygen/) now planning to increase the number of installations vastly.

Other leading countries developing ocean power technologies are Canada and the United Kingdom, both endowed with some of the highest tides anywhere in the world. Canada has a number of tidal energy schemes along its Atlantic coast, primarily in Nova Scotia, where scores of competing companies are testing various prototypes. The U.K. has more than 20 of these projects in the pipeline, some still in the research and development stage, but many now being scaled up for deployment.

Meanwhile, China encourages tidal stream energy by offering a generous feed-in tariff 3x the price of fossil fuels. That’s similar to the rate deployed by countries that are trying to launch solar and wind power. The incentive is high enough that one Chinese company is already feeding ocean power into the main grid profitably.

**Ocean Energy Benefits**

Ocean power comes with some distinct advantages.

First off, it’s clean and compact, featuring higher energy density than either solar and wind projects. For instance,[Sihwa Lake Tidal Power Station](https://www.hydropower.org/blog/technology-case-study-sihwa-lake-tidal-power-station) in South Korea, the world’s largest tidal project with an installed capacity of 254MW, was easily added to a 12.5km-long seawall that was built in 1994 to protect the coast against flooding. Compare that to the 781.5MW [Roscoe wind farm](http://www.solaripedia.com/13/163/1482/roscoe_wind_farm.html) in Texas, which takes up 400km2 of farmland, or the 150MW-Fowler Ridge wind project in Indiana that sits on a 202.3km2 parcel of land.

Even solar farms are usually bigger, such as the Bhadla Industrial Solar Park in Rajasthan, India, that is spread across 45km2 of land or the Tengger Desert Solar Park in China that covers 43km2 This means that even smaller countries with long enough stretches of coastline can use tidal power to compete with bigger, land-rich countries such as the U.S., China and India that can afford to dedicate large tracts of land for solar and wind projects.

Second, tidal power is much more predictable than either solar or wind, which can be extremely intermittent.

Finally, the equipment used in ocean power deployments such as tidal barrages are long-lived concrete structures that can have life spans up to 4x longer than typical solar or wind farms. The La Rance in France, for example, has been operational since 1966 and remains in good working order with 240MW generation capacity.  
  
So, what’s stopping the rest of the world from jumping into the Blue Energy bandwagon?

**The Cost Barrier**

Money always gets in the way.

The challenges of harnessing tidal and wave power, though, can be daunting.

Tidal power projects hold some of the loftiest up-front price tags in the renewable energy sector. The aforementioned La Rance cost 620 million francs back in 1966, or more than a billion dollars today after adjusting for inflation while Sihwa Lake Tidal Power Station cost $560m. The proposed [Swansea Bay Tidal Lagoon project](http://www.tidallagoonpower.com/projects/swansea-bay/) in the U.K. has been priced at £1.3bn ($1.67bn).

In comparison, The Tengger Desert Solar Park costs around $530m--roughly the same cost as Sihwa for 3.3x as much power. Likewise, the Roscoe Wind Farm cost around $1bn for an output of 781MW, about 1.7x better cost efficiency than Sihwa Lake. Although the long-term generation costs of ocean power projects are relatively good compared to other renewable energy systems, the initial construction costs can make them unachievable for poorer nations.

The second big challenge is the lack of sufficient research. One reason why Ocean Power Technologies has been going nowhere is mainly because it dedicates so little money to R&D. The $3.3M (market cap) company has racked up more than $200 million in debt since its founding in 1984 and spends ~$1.3 million a quarter on R&D. Many tidal power technologies are simply not deployable on an industrial scale, thus limiting the expansion of the energy system.

Of course, this is exactly what OES is trying to change through concerted R&D efforts between nations.

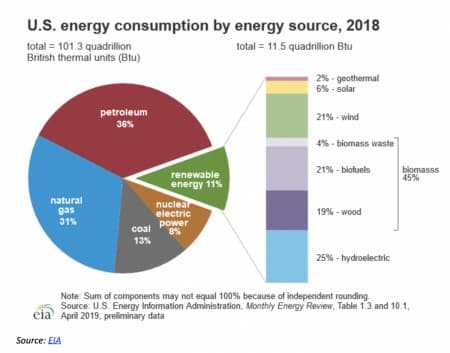
**Bright Future**

The OES has identified several challenges centered around affordability, reliability, operability, installability, standardization, funding availability, and capacity building that will require to be solved before ocean power can become a mainstream renewable energy source.

[**Related: Oil Market Chaos Has Created The Greatest Trade In Decades**](https://oilprice.com/Energy/Crude-Oil/Oil-Market-Chaos-Has-Created-The-Greatest-Trade-In-Decades.html)

The organization, in particular, emphasizes the need for significant cost reductions required for ocean energy technologies to compete successfully with other low-carbon technologies. The European target is to get tidal stream energy down to €0.10 per kilowatt-hour and wave power down to €0.15 by 2030, which would also make them competitive with fossil fuels if these traditional sources were obliged to pay for capture and storage of the carbon dioxide they generate.

Unfortunately, the United States has no tidal power plants mainly because it lacks an abundance of sites where the technology can be economically harnessed. The country will have to be content with other low-carbon technologies such as [solar, wind, and bio fuels](https://www.eia.gov/energyexplained/renewable-sources/) where it has better competitive advantage.

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Source: [EIA](https://www.eia.gov/energyexplained/renewable-sources/)

By Alex Kimani for Oilprice.com

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Rare Petro

**Abstract:**

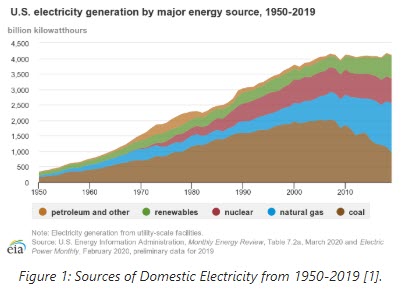
The dual black swan events of the COVID-19 pandemic and oil price war have created a unique analytical opportunity within petroleum products. As oil prices crash, the natural gas prices have largely remained unchanged. This is due to the markets in which the commodities are used. Transportation which is the main use of oil has almost entirely stopped, whereas electricity generation and heating, the destination for most natural gases has remained similar to pre-2020 levels. The market has priced these assumptions relating to production and usage demand into the futures prices showing the oversupply of natural gas is expected to correct faster than that of crude oil. Factors for these assumptions include the sources allocated to electricity generation, changes in electricity usage and demand due to COVID-19, anticipated oversupply for crude products like fuels, and anticipated production decline for crude, NGL, and natural gas due to current market forces.

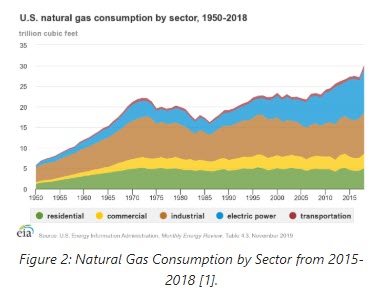


**Introduction:**

The COVID-19 pandemic has all but shut the world down and is showing no signs of global relief. It does not matter how cheap oil is if people are not driving, flying, or consuming anything aside from the bare essentials – there is no demand boost from low prices. With crude demand disappearing all around the world, oversupply on the market has run rampant. Luckily for the natural gas sector, such dramatic demand declines are not being felt across the industry. This is due to the fact that a majority of crude oil is utilized in transportation (an industry hit hardest by the pandemic) while a majority of natural gas consumption is used in power and heat generation (an industry only slightly affected). As a result, the strip price for natural gas is showing larger percentage increases than crude or NGLs because the market is pricing in the assumption that continued electricity demand will not fall as quickly as the oversupply of natural gas.

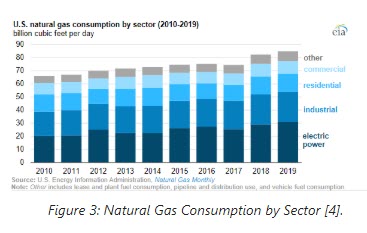
**Average Electricity Generation Allocation in the U.S. – Past to Present:**

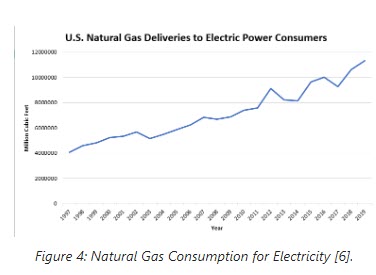
Dating back to the 1950s, coal was the leading source of electricity generation in the United States. Coal sat alone atop the electricity industry until 2016 during the Obama administration when natural gas took the majority share in domestic electricity generation. As gas emits half the CO2 as coal, coal factories began to shut down in favor of its more environmentally friendly cousin. While natural gas was responsible for 38.4% of the electricity generation in 2019, the 28.5% generated by coal will eventually be taken over by a mixture of renewables and natural gas in the short term as it is much cheaper than nuclear [1]. By comparison, a nuclear power plant costs $5,366 per kilowatt of capacity to build, a wind farm costs $1,980 per kilowatt of capacity while a new gas plant only costs $912 to construct for the same kilowatt of capacity [2]. Since coal has continued to follow the downward trend seen in Figure 1, new electricity sources are mostly coming from solar, wind, and natural gas. Coal is on the way out, and due to its environmentally friendly and cost-effective nature, natural gas will take over for years to come. Power generation will generally trend towards the resource with the lowest operating cost and by association lowest price, which is another reason renewables and natural gas are continuing to play a bigger sourcing role than coal.

Fossil fuels (primarily natural gas) will dominate the energy sector over the next fifty years, while renewables (mainly solar and wind power) will continue their upward trajectory before leveling off mid-century. According to the EIA’s annual Energy Outlook, energy sources such as wind and solar have grown quickly thanks to aggressive policies and subsidization, but such subsidies are projected to run out and slow the rate at which renewable sources grow [3]. If the damage from COVID-19 is great enough, there will not be a ton of free cash flow or incentive to invest in clean energy and policy will turn toward the cheapest option that will continue to generate clean energy into the future.

**Historic Usage and Projected Drop in Electricity Demand:**

Natural gas consumption in the United States is shared amongst the electric power, residential, industrial, and commercial sectors (Figure 3). Moreover, due to power plant technological improvements and competitive natural gas prices, the electric power sector has accounted for the largest share of natural gas consumption in the last decade. Temperature, on the other hand, also largely drives annual fluctuations in natural gas consumption. During the winter, consumption levels are at their highest in the residential and commercial sectors since natural gas is the predominant fuel for heating across most of the U.S (except in the East coast where heating oil is predominately used) [5]. In the summer, however, relatively high temperatures increase electricity usage, as demand for air conditioning increases.

Electric power consumption from natural gas historically shows an increasing trend in the period from 1997 to 2019 (Figure 4). In 2019, according to the EIA, electric power accounted for about 35% of total U.S natural gas consumption [6]. The 2020 projection for natural gas electricity consumption is currently estimated at 31.3 Bcf/d [10]. This remains uncertain and largely skewed however given the COVID-19 pandemic which has forced businesses to shut down and caused most people to stay home to work. The question then becomes – given that the electric power sector represents the largest share of natural gas consumption, how likely is it to be impacted, and how significant will the drop in consumption from the residential, commercial, and industrial sectors be?



The April 2020 EIA short term energy outlook is forecasting a decline of electricity retail sales in 2020 of 4.7% for the commercial sector, 4.2% for the industrial sector, and 0.8% for the residential sector [10]. This is a total electricity retail sale decline of 9.2% in 2020. Empty commercial and industrial buildings may not be consuming as much electricity, but essential businesses are still operating and commercial buildings are still consuming a baseline level of electricity for necessary operations such as heating and cooling, vampire power (a.k.a. standby power), security systems, and other essential systems. While retail sales in 2020 are expected to decline by 9.2%, power generation is only expected to decline by 3% over the same period with coal power generation falling by 20%, natural gas generation rising by 1% and renewable generation growing by 11% [10]. It should be noted that the allocation decline and growth percentages are for each individual source and not the total electricity generated.

**[](https://www.oilandgas360.com/eia-expects-u-s-energy-related-co2-emissions-to-fall-in-2019/)**

[**EIA expects U.S. energy-related CO2 emissions to fall in 2019**](https://www.oilandgas360.com/eia-expects-u-s-energy-related-co2-emissions-to-fall-in-2019/)

**[](https://www.oilandgas360.com/eia-expands-data-on-capacity-and-usage-of-power-plants-electricity-storage-systems/)**

[**EIA expands data on capacity and usage of power plants, electricity storage systems**](https://www.oilandgas360.com/eia-expands-data-on-capacity-and-usage-of-power-plants-electricity-storage-systems/)

**[](https://www.oilandgas360.com/eia-projects-total-u-s-energy-related-co2-emissions-to-be-relatively-flat-through-2050/)**

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**[](https://www.oilandgas360.com/eia-expects-the-united-states-will-return-to-being-a-net-importer-of-crude-oil-and-petroleum-products/)**

[**EIA expects the United States will return to being a net importer of crude oil and petroleum products**](https://www.oilandgas360.com/eia-expects-the-united-states-will-return-to-being-a-net-importer-of-crude-oil-and-petroleum-products/)

**[](https://www.oilandgas360.com/eias-short-term-energy-outlook-is-the-source-for-eias-latest-analysis-of-energy-markets/)**

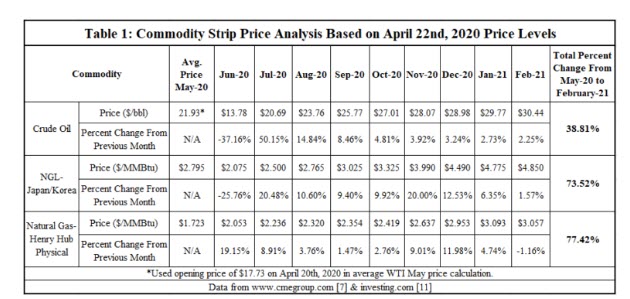
[**EIA’s Short-Term Energy Outlook is the source for EIA’s latest analysis of energy markets**](https://www.oilandgas360.com/eias-short-term-energy-outlook-is-the-source-for-eias-latest-analysis-of-energy-markets/)

**[](https://www.oilandgas360.com/eia-interactive-tools-you-can-use/)**

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**Projected Commodity Strip Prices:**

There will be a drop in demand for natural gas as the coronavirus pandemic greatly reduces commercial electric power and heating consumption. Lockdown orders forcing society to shelter in place will increase residential consumption and help buffer that blow. The market recognizes the demand declines experienced in the natural gas sector will dwarf in comparison to the destruction of the crude oil and associated liquids markets. With decreased travel creating increased gasoline, ethanol, and jet fuel supplies, crude demand will be unable to correct oversupply as quickly as natural gas. In order to predict the market’s faith in these commodities, data from the CME Group on futures pricing was compiled to compare future commodity strip prices (Table 1) [7].



The projected data uncovers market assumptions showing that natural gas is expected to recover from the pandemic and stabilize far sooner than the crude oil and NGL markets. The change in strip pricing for crude futures between May 2020 and February 2021 projects a 38.81% increase. Natural gas futures over the same period show an astonishing price growth of 77.97%, resulting in a natural gas futures growth of 38.62% over crude oil. Some of this change is due to natural contango in the futures markets where futures prices are always greater than the spot price, however if this were the only price factor the percent change between commodity streams would be relatively similar. This shows the market is expecting the oversupply in natural gas to be offset sooner than the oversupply in crude oil. There are several reasons for this assumption. The most prominent reasons are that consumption of natural gas products have not degraded as sharply as fuel created from crude oil, and as market forces cause the shut-in of uneconomic oil wells the associated gas production will also cease. This associated production is a major factor in the gas oversupply since it can sometimes be two to six times the gas-oil ratio (Mcf/Bbl) for a barrel of oil produced. As NGLs are a product of wet natural gas and used highly in the electric power generation and heating industries as well as transportation, the data shows there is also faith for a stable price rebound in the NGL market soon.

**NGL and Natural Gas Yields:**

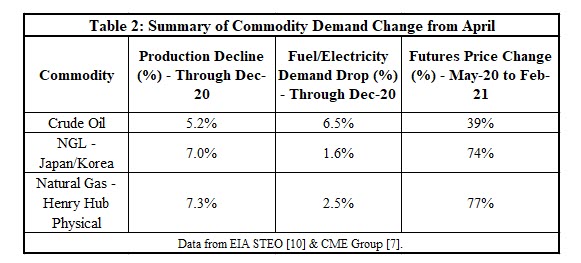
As seen in Figure 5, NGL production has increased across all regions since 2012 with the largest increase coming from the Northern Appalachian region (Marcellus and Utica Shale), where production increased from 43,000 b/d in 2012 to 512,000 b/d in 2017 [8]. Similarly, NGL production has doubled in both the Permian Basin and the Eagle Ford play from 2012 to 2017 and has more than tripled in the Bakken. Natural gas production continues to grow with withdrawals in the Appalachian region increasing from 28.6 Bcf/d in 2018 to 32.1 Bcf/d in 2019 [9]. For this area, Pennsylvania had the largest annual increase in gross withdrawals of natural gas, increasing by 2.1 Bcf/d in 2019 to reach 19.1 Bcf/d. Nationally, Pennsylvania’s annual change was second to that of Texas, where gross withdrawals increased by 3.6 Bcf/d to a record annual production of 28.0 Bcf/d. Texas’s increase in natural gas production is mainly from development in the Permian Basin and Haynesville shale formations.



Gas plays are slowing production because of higher-than-average natural gas inventories and prices lower than $2/MMBtu. In the coming months, U.S. natural gas production is expected to decline, leading to a decrease in the gas market oversupply as we enter winter 2020 and into 2021. Output will drop the most in the Appalachian region because of low natural gas prices and in the Permian region, where low oil prices are forcing producers to cut production, thus reducing associated gas and NGL output from oil wells.

**Conclusion:**

Despite the citizens of the world staying home and contributing to more residential electricity demand, it has not offset the decrease in other forms of electricity demand as commercial buildings, factories and other large electricity users slow or stop operations reducing their power and heating needs. Overall, retail sale electricity demand is projected to fall 9.2% in 2020, but power generation is only expected to decline 3%, which will result in a 6.2% net power demand oversupply. Since natural gas makes up around 40% of electricity generation, about 2.5%, or 0.78 Bcf/d, of the net oversupply will be allocated to natural gas. Due to current low commodity prices, gas production will naturally drop which will be magnified by the reduction in associated gas as oil wells are shut-in and capital budgets continue to be slashed. With gas production expected to fall by 7.3% in the next nine months, about 2.8 Bcf/d of the 7 Bcf/d decline would have supplied power generation. Pair this with storage expected to decline from peak winter season usage, the natural gas oversupply will correct faster than the decrease in electricity demand from lockdown orders. Finally, without as much travel resulting from the coronavirus, fuels generated from oil and NGLs will have decreased demand and the liquid oversupply will not be able to come back into supply and demand balance as fast as natural gas. Since NGLs are a byproduct of natural gas and both contracts are sold in $/MMBtu, increased prices for a British thermal unit will affect the contract value of both commodities.



As a result, the market has built these assumptions into futures pricing which can be seen from the 77% change for contracts in natural gas and a 74% change for NGL contracts between May 2020 to February 2021. This increase is disproportionate compared to a 39% change for crude oil contracts in the same period showing the demand imbalance for travel fuel compared to electricity and heating.

**Editor’s Note:**

Much of the data represented in this piece was compiled and evaluated before the energy markets went into free fall on April 20th. When the May contract cratered below zero, we believe the market priced in an assumption for more oil production cuts than when the April 15th data (which is also reflected in current natural gas and NGL futures prices). For this reason we used an average futures price for the May 2020 contract compared to recent strip prices. Due to current commodity volatility in recent days the prices and percentages have changed, but the same underlying principles apply from this analysis that the market is still pricing in production cuts compared to supply for natural gas.

**References:**

[1] [**https://www.eia.gov/energyexplained/electricity/electricity-in-the-us.php**](https://www.eia.gov/energyexplained/electricity/electricity-in-the-us.php)

[2] [**https://www.vox.com/2016/2/29/11132930/nuclear-power-costs-us-france-korea**](https://www.vox.com/2016/2/29/11132930/nuclear-power-costs-us-france-korea)

[3] [**https://www.eia.gov/outlooks/aeo/**](https://www.eia.gov/outlooks/aeo/)

[4] [**https://www.eia.gov/energyexplained/natural-gas/use-of-natural-gas.php**](https://www.eia.gov/energyexplained/natural-gas/use-of-natural-gas.php)

[5] [**https://www.eia.gov/energyexplained/oil-and-petroleum-products/use-of-oil.php**](https://www.eia.gov/energyexplained/oil-and-petroleum-products/use-of-oil.php)

[6] [**https://www.eia.gov/todayinenergy/detail.php?id=43295**](https://www.eia.gov/todayinenergy/detail.php?id=43295)

[7] [**https://www.cmegroup.com/trading/energy/**](https://www.cmegroup.com/trading/energy/)

[8] [**https://www.eia.gov/todayinenergy/detail.php?id=38772**](https://www.eia.gov/todayinenergy/detail.php?id=38772)

[9] [**https://www.eia.gov/todayinenergy/detail.php?id=43115**](https://www.eia.gov/todayinenergy/detail.php?id=43115)

[10] [**https://www.eia.gov/outlooks/steo/pdf/steo\_full.pdf**](https://www.eia.gov/outlooks/steo/pdf/steo_full.pdf)

[11] [**https://www.investing.com/commodities/**](https://www.investing.com/commodities/)

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