Surviving a pandemic

The energy industry – from oil to renewables – has been hit by the coronavirus in both predictable and unprecedented ways. *Jennifer Johnson* assesses the damage to date and looks at whether there are lessons to be learned from the financial crash of 2008.

It would be something of an understatement to say that the Covid-19 pandemic has delivered a shock to global markets. Efforts to contain the virus necessitate profound and wide-reaching shifts in the daily lives of millions. As part of the lockdown measures in place across the world, citizens have been asked to rapidly alter their patterns of travel and consumption.

Home working and social distancing policies have naturally had a serious impact on energy demand. Some firms in the sector, such as transmission system operators, have said they have contingency plans in place to minimise disruption. Others, particularly fossil fuel producers, face an immediate threat to their continued existence.

In a research briefing published in late March, analysts from the investment bank Goldman Sachs reported that social distancing measures had already impacted 92% of global GDP. Countries that have imposed lockdowns had typically seen their electricity use drop by around 15%, according to the International Energy Agency (IEA).

However, reductions in demand for transport fuels have been far more dramatic, leading to widespread panic among oil and gas giants. Many of the majors – Shell, Total and Chevron among them – have already announced cuts to capital spending of around 20% this year.

'Not only is this the largest economic shock of our lifetimes, but carbon-based industries like oil sit in the cross-hairs as they have historically served as the cornerstone of social interactions and globalisation, the prevention of which are the main defense against the virus,' wrote the Goldman analysts.

Coal and coronavirus

The Covid-19 pathogen does the most damage to people who already lack robust immune defences. Something similar can be said for its economic effects: that is, businesses with weak balance sheets at the start of the pandemic likely won't survive to its conclusion.

While the oil and gas sector has been the focus of much concern so far, coal firms are perhaps more obvious casualties. In the US and Europe, it's now almost always cheaper to generate power with natural gas or renewables. It's also well known that coal has the worst environmental profile of any common energy carrier, leading climate-conscious policymakers and investors to turn their backs on it *en masse*.

Coal plants in the US in particular have struggled to turn a profit. Before the pandemic struck, the credit ratings agency Moody's was expecting the country's coal production to fall by 15–20% this year. It has since released a statement saying that it anticipates: 'industry conditions will worsen beyond this forecast' as the virus hits demand for commercial and industrial electricity. The outlook is not much brighter in countries where coal use is increasing, the majority of which are located in the rapidly industrialising Global South.

According to Global Energy Monitor (GEM), an NGO that tracks fossil fuel infrastructure, there is still around 200 GW of coal capacity under construction and another 300 GW under development worldwide. At the

Even with serious cuts to oil production, there are concerns that there's not enough storage infrastructure for crude oil amid the pandemic.

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start of April, GEM research showed that 15 projects, totalling more than 13 GW, were experiencing COVID-19 related construction delays.

However, there's evidence of a rebound effect in China, which had started relaxing its lockdown measures as this edition of *Energy World* went to print. From 1 to 18 of March 2020, the country gave the green light to almost 8,000 MW of new coal-fired capacity – significantly more than the 6,300 MW signed off by officials in all of 2019. It's possible that China intends to use the projects to boost its economy, though this isn't likely to save embattled mining firms elsewhere in the world.

Turmoil for oil

The link between economic growth and energy demand is long established. It follows that what is bad for the global economy is also bad for the oil and gas industry. And the coronavirus situation intensified during a rather inconvenient period of tension between two of the world's major crude producers.

In March, a price war ignited between Russia and Saudi Arabia when the former could not agree to curb production in line with other members of the so-called OPEC+ cartel. As the pandemic worsens, the oil market is confronting an oversupply of around 25mn barrels per day (bpd). There are ongoing concerns about where all this excess oil will be stored, as pipelines and rail cars fill up across the world.

The standoff ended on 12 April following an intervention by US President Donald Trump. OPEC members have agreed to slash 9.7mn bpd in oil production during the months of May and June. This is a figure equivalent to almost 10% of global oil supply and is more than double the size of production cuts instated during the 2008 financial crisis.

Prior to the deal, the IEA estimated that a stockpile of 15mn bpd could be amassed even with production cuts nearing 10mn bpd. Under normal circumstances, a price crash usually drives a reaction from consumers. But the movement restrictions imposed by the pandemic mean that very few people or organisations have much need for cheap oil. As storage capacity dwindles, prices are only likely to fall further. Some 50mn jobs in the oil refining and retail industries are reported to be at risk.

It's not yet clear what the oil industry will look like on the other side of this crisis. In a recent article, the IEA stated that some of the sector's 'angst' about the inevitability of the energy transition has been brought forth to the present day. 'Although demand for oil will rebound when the crisis eases, the dislocation could accelerate some structural changes in the way the world consumes oil,' the organisation notes.

Businesses with weak balance sheets at the start of the pandemic likely won't survive to its conclusion

In the short term, the gas sector is likely to be somewhat more protected because its products are not heavily used in transport. However, industrial power and electricity demand will be curtailed, meaning it might also become necessary to constrain gas supply.

Ramping up renewables?

Policymakers will ultimately decide whether the pandemic accelerates the shift towards renewable energy or obstructs progress to the detriment of emissions targets. Climate activists are already urging governments not to greenlight 'shovel ready' fossil fuel projects when it comes time to stimulate economic growth. In the US, a group of economists, climate scientists and environmental activists are calling for a $2tn spending commitment from the federal government to create new jobs in cleantech industries – such as housing retrofit and offshore wind.

The 'Green Stimulus' proposals, which were laid out in a letter to Congress on 22 March, are designed to ensure that the US can rebuild its economy as it decarbonises. Its writers cede that no serious clean infrastructure work can begin until the threat of disease has abated, but it urges policymakers across the country to lay the necessary groundwork today.

'This preparatory phase must include building up capacity within existing federal, state, and local government agencies (and chartering new ones as necessary) to help manage the implementation phase of this stimulus,' the letter reads. 'In the weeks ahead, the government will undoubtedly pass further stimulus measures. At each step, we must push for that stimulus to be green.'

US renewable developers and advocates are naturally reevaluating the impact of Barack Obama's 2008 economic stimulus package to see what can be learned from the world's last serious financial meltdown. The administration's American Recovery and Reinvestment Act provided $90bn to promote clean energy and supported 900,000 jobs in the sector from 2009 to 2015.

Most notably, the public money helped Tesla – then a niche manufacturer of electric sports cars – grow its operations and expand production. The stimulus also backed the first five US solar PV projects larger than 100 MW.

Economic forecasts show that there are significant gains to be made from investing in resilient infrastructure in developing countries. This means that when the weather-related impacts of climate change strike, as they increasingly do, the bridges, water pipes and electricity connections in growing economies will be able to cope.

Analysis from the World Bank and the Global Commission on Adaptation found that the net benefit of investing in resilient infrastructure in these countries over the next decade would be $4.2tn over the lifetime of new assets, with a $4 benefit for each $1 spent.

The task at hand

In the long term, it's clear that comprehensive investment in clean energy and climate adaptation projects could help the world get back on track after the COVID-19 crisis. But in the short term, some governments may choose to roll back environmental regulations to prop up incumbent industries.

In late March, the US Environmental Protection Agency announced it would temporarily permit non-compliance with pollution rules by carbon intensive businesses, including power plants and oil refineries. Officials have not specified an end date for the rollback. Meanwhile, European airlines have asked Brussels for relief from environmental taxes.

The decisions made by governments in the face of the COVID-19 pandemic will have lasting ramifications for the global energy industry. Bailing out highly polluting firms may seem like an economically shrewd manoeuvre today, but it could ultimately keep the world from adhering to the targets of the Paris Agreement. Equally, failing to offer adequate financial support to key actors could exacerbate the current crisis.

There are no quick wins to be had or easy fixes to deploy. In the present moment, governments must do what they can to prevent markets from entering a dangerous free fall. But damage control must not come at the expense of people or the planet. ●