

# Energy & Utilities

## Operating in the “new normal”

Key considerations for mitigating risk and seizing opportunity in a post-crisis world

### Colette Lewiner

Energy advisor to  
Capgemini Chairman

### Philippe Vié

Global Leader, Energy, Utilities  
and Chemicals, Capgemini



Late last year, we concluded the global editorial of our [World Energy Markets Observatory](#) by saying that : achieving the climate change and sustainability goals outlined in the Paris Agreement would require a radical change in lifestyle and industry operations. Today's global health emergency has inadvertently led to such a change, effectively decreasing energy consumption through travel restrictions, reductions in industrial production and social distancing measures. The result? A significant drop in greenhouse gas (GHG) emissions—albeit not one worthy of celebration given its steep cost in terms of mortality, human suffering, economic hardship and social strain.

While the environmental outcomes related to the pandemic may appear positive at first glance, the actions driving them are by no means a practical way to achieve sustained, responsible and economically viable change.

In this paper, we explore the present energy and utilities landscape, how the current health emergency will affect energy transition efforts and what organizations can do to effectively address risks and opportunities within this new normal.

## Highlights from the 2019 World Energy Markets Observatory

**^2.3%**

In 2018, global energy consumption rose—nearly twice the average rate since 2010—as driven by a robust worldwide economy.

**^14%**

Global renewables are the fastest growing energy source.

**^4%**

Fossil fuels still dominate much of the worldwide energy mix, with global coal consumption increasing 4%.

**^2%**

Global GHG emissions have increased, despite significant reductions in the EU.

## The impact of the crisis

The economic slowdown due to countries on lock-down, has resulting in large corporations and small business to halt the production of goods and services, due to the concern and safety of their people. This inevitably has caused decrease in GDP worldwide, notably in China which suffered a contraction of 6.8% of its GDP in the first quarter of 2020. On this same Quarter, Eurozone GDP decreased 3.8%, from -2.2% in Germany to -5.8% in France. End of April, the European Commission published a prediction of a 6 to 8% GDP decrease for 2020 full year in the member states.

To ensure the safety of their employees, companies have set up teleworking wherever possible, which has demonstrated that functions like maintenance diagnostics, customer relations, and energy trading are achievable from a distance. Telecommuting has highlighted the importance

of information systems and tested a company's robustness. Seeking to weaken businesses on the vital IT links, cyber-attacks have unfortunately multiplied.

Today's health crisis has significantly reduced global mobility and slowed industrial production, the combination of which has resulted in a considerable drop in oil, gas and electricity consumption.

According to the International Energy Agency, daily demand for oil is expected to fall by 29 million barrels per day in April 2020, a year-over-year reduction of almost one-third. Consumption is set to drop another 25 million barrels per day in May, after which the Agency anticipates a slight increase in consumption as travel restrictions are eased or lifted.

Throughout 2020, demand is expected to contract by 9.3 million barrels per day. Meanwhile, fuel consumption is plummeting all over the world. In France, for example, sales of diesel and gasoline have dropped by around 80 percent with demand for kerosene even lower.

The Organization of Petroleum Exporting Countries (OPEC), along with Russia, entered an agreement on April 10 to reduce production and withdraw close to 10 million barrels from the market on May 1. Production is also expected to decline in other countries, notably the United States, where shale oil producers are struggling with low market oil prices.

This activity in the U.S. would further reduce global supply by 3.6 million barrels.

However, these production reductions are not enough to drive prices up. In mid-April, the barrel price of West Texas intermediate (WTI) oil fell below \$20, its lowest level since 2002. Meanwhile, Brent crude was at less than \$25 per barrel. Prices have dipped even more since then with in North America negative prices for WTI. With the lockdown end in many countries and a demand rebound, the Brent grew again mid-May above \$30, half of the pre-crisis level.

## Electricity security of supply: More vital than ever

In all developed countries, electricity is considered a strategic sector. As such, operators must have Business Continuity Plans (BCPs) and the resources to successfully apply them.

In countries where strict social distancing measures have been introduced, electricity consumption has dipped. For example, in France, usage in March and early April fell 20 percent compared to the previous year. This decrease is indicative of usage rates all over Europe, where consumption fell anywhere from 13 percent in Germany to 28 percent in Italy. Decreases in the U.S. were more modest, with consumption falling about 3 percent in late March, as compared to the previous year. While certainly lower than Europe, this number is still significant, representing a loss of about three years' sales growth<sup>1</sup>.

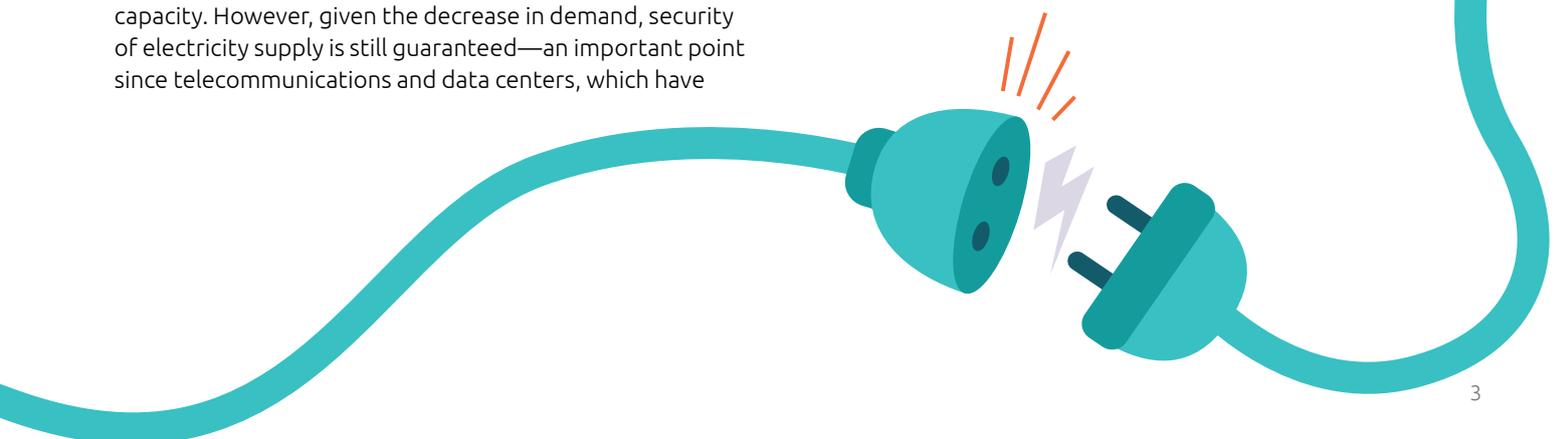
EIA predicts a decrease post-crisis of the Electricity Demand of about 6%, compared to pre-crisis levels<sup>2</sup>.

In France, maintenance planning, most notably for the annual shutdown of nuclear reactors, has been affected by sanitary restrictions, thereby reducing electricity production capacity. However, given the decrease in demand, security of electricity supply is still guaranteed—an important point since telecommunications and data centers, which have

become even more vital with the lock down due to remote work activities, require a secure power supply.

As consumption and oil prices fell, so too did carbon prices. Rates are now more than 20 percent lower than usual, as driven by decreased industrial activity. This has led to a sharp drop in wholesale electricity prices from €50/MWh in 2019 to just €20/MWh in mid-April / early May.

During this unprecedented crisis, employees of the electricity and gas companies showed great dedication. With the same spirit of public service, Utilities as EDF, ENGIE and numerous others, launched actions vis-à-vis the unprivileged populations pledging not to cut supply for several months, even in the event of unpaid bills. Many major companies in North America, such as Duke Energy, PSE&G and Nova Scotia Power, have pledged to halt disconnection orders due to the pandemic as well.



# The impact on energy transition

Mobility restrictions and the sharp industrial slowdown have had a very favorable impact on real-time GHG emissions. For instance, in February, Chinese GHG emissions fell 25 percent, or 200 million tons, compared to the same period in 2019. This decrease is equivalent to the annual GHG emissions of Argentina. European observers report a drop of more than 50 percent in emissions across the continent during the first few weeks of travel restrictions. Globally, GHG emissions could decrease by more than five percent this year, the largest decrease in emissions since World War II, and come back to 2010 level.

Furthermore, this decrease being conjunctural and non-structural, one can think that after the crisis, emissions will start to rise again.

However, the most pressing question is how economies will rebound after the crisis—and what the recovery means for long-term climate goals. On one hand, citizens and some political parties are advocating for a green stimulus plan leading to a more sustainable economy with zero-carbon long-term objectives. On the other, this health crisis has forced some governments to redefine their priorities, which includes reallocation of resources to focus on research, health and education initiatives. As such, they could decide to decrease or defer the subsidies granted to renewable energies to these sectors. The fall in electricity prices also reveals a very significant gap between the feed-in tariffs (sometimes around € 100/MWh for certain wind offshore projects) and current market prices of around € 20/MWh.

In addition, due to delays in construction sites during containment, as well as investor reserves in an uncertain economic environment, the new capacity of solar farms and wind turbines installed worldwide will drop. In 2020, according to the IEA, this fall will be 18% for solar and 12% for wind (compared to 2019). To grow again in 2021 and after.

The Green Deal for Europe, launched by the newly-appointed President of the European Commission, Ursula Von Der Leyen, proposes a roadmap to achieve a fair transition to the Union's climate neutrality in 2050. The cross-sector plan would allocate investments of up to €100B annually from 2021 to 2027. These investments aim to support environmentally-friendly technologies, industry innovation, cleaner transport, de-carbonization of the energy sector and energy efficiency improvements in buildings. Given the current crisis, it seems that this Green Deal is no longer the European Commission's top priority and that some aspects would need to be reduced to accommodate pressing health, education and business initiatives.

For example, the European executive is expected to postpone the date by which it must propose new objectives for reducing 2030 GHG emissions. According to the existing directive, these emissions should be reduced by 40 percent compared to 1990, though the Commission was expected to raise this figure to 50 or 55 percent. On a related note, the 2020 United Nations Climate Change Conference (COP26), which was scheduled in Glasgow for November 2020, has been postponed to 2021, which may further delay the decision.

## Navigating the “new normal”

Most everyone living through this period of history are eager to return to “normal.” But many health experts, world leaders and business analysts have suggested that the world that emerges from this crisis may be fundamentally changed.

The impact of this health emergency will depend on the strength of the economic rebound: different scenarios are possible: a strong rebound (exit in V), a resurgence of the pandemic (exit in W) and a sustained low economy period (exit in L). In the first case, the crisis could be quickly forgotten, and the world will revert to the status quo. In

the latter cases, the post-crisis world could be substantially different due to sustained change in our way of living and working, as well as a restructuring of world economic priorities. The results of this crisis could also vary by region.

Here we consider some fundamental issues that will impact the Energy and Utilities sector and how they can prepare to address them in the months to come.

## New ways of working and living

The health emergency forced many organizations to create a remote workforce almost overnight. For many, teleworking was a welcome change with employees and employers alike quickly recognizing the productivity and flexibility gains. At the same time, this model has its drawbacks. According to recent studies<sup>3</sup>, some remote workers report having trouble disengaging from their job and the technology that enables it. According to a French survey<sup>4</sup>, 41 percent of teleworkers miss exchanges with their colleagues, though 51 percent appreciate saving commuting time.

In this data we see the limitations of teleworking at-scale. Thus, we expect that while white-collar workers will likely return to the office, it will not be on a full-time basis. Again, we anticipate regional and sectoral differences, making it important for companies to establish a teleworking policy that addresses the needs and preferences of their employees while maintaining high standards for productivity, efficiency and quality. Displacement could also be reduced in the long term. In addition to reducing home-to-work journeys, many international meetings should take place using the virtual means tested during the crisis.

**Takeaway: Companies must quickly define and enact their teleworking and mobility policies post-crisis.**

## Digitization will be accelerated

The current health crisis has demonstrated that some processes and operations throughout the value chain, including plant maintenance, safety controls, energy trading, client relationship management and support, finance and marketing, could be done virtually. This realization will certainly accelerate sector-wide digitization. At the same time, some organizations may experience resistance as employees fear transitioning to new roles and employers struggle to manage the digital transformation agenda. Furthermore, the crisis may have revealed limitations of proprietary data management infrastructures and their lack of agility, as well as their exposure to cyber risk, leading certain players in the sector to consider an accelerated migration of their applications and data to the cloud.

**Takeaway: Business leaders must reevaluate their digitization transformation plans and, in many cases, increase efforts to leverage faster operational cost savings. A particular attention should be also paid to the robustness of cyber-attacks.**

## Industrial assets

As a result of this crisis, some industries will witness a double movement. Factories will be closed in sectors highly affected by the crisis, such as air transport or automotive. At the same time, some organizations may relocate the production of critical components within the supply chain to be closer to the customer. As a result, it is possible that industrial and competitive production will increase in developed countries.

**Takeaway: Utilities must be attentive to the magnitude and the consumption impacts of these two opposite transformation triggers.**

## Energy consumption

In many countries, social distancing measures will be relaxed progressively, while travel will remain restricted. As such, the transportation sector is likely to be affected for many months. Likewise, oil consumption will remain lower than before the crisis. This could lead to a significantly lower level of GHG emissions. This is good news for the climate but could lead to long-lasting revenue and margin decreases for Oil and Gas companies.

**Takeaway: Oil and Gas Companies must adapt the retail part of their value chain to reflect new consumption patterns, and accelerate their diversification.**

## Electricity consumption

Electricity, which proved its importance and resilience during the crisis, is likely to remain the preferred energy carrier in the future. That said, consumption patterns will be modified to acknowledge a decrease in the tertiary, and perhaps industrial, sector, as well as an increase in the residential sector. Consequently, the load curves will change and impact Utilities' margins, depending on the profitability of their customer segments. Electric mobility could also develop (more limited travel) to the detriment of fuel consumption.

**Takeaway: Utilities must anticipate short-, medium- and long-term load curve shifts and evaluate change intensity.**

## Client churn

During the crisis, client churn appears to have decreased. Post-crisis, the situation could change as customers impacted by job decreases or unemployment may have budget concerns. Meanwhile, a drop in wholesale prices could offer opportunities to new entrants to propose cheaper tariffs, fueling a wave of carrier changes.

**Takeaway: Companies should anticipate higher customer churn and adapt their services and prices accordingly.**

## Energy Prices

The gradual rise in demand should lead to an increase in spot electricity prices (forward prices for next year are at 40 € / MWh). However, these are expected to remain lower than before the crisis. For oil prices, the lasting drop in demand and the current overproduction could keep prices low. It is difficult, however, to predict production restrictions on the part of OPEC or American shale oil producers. It is also necessary to take into account possible geopolitical tensions, which could drive up prices.

**Takeaway: Energy companies will need to account for more price volatility.**

## Finance

While the crisis is likely to have a negative impact on the finances of all “utilities,” it will most affect those that are fragile. The impact is stronger for oil operators, whose revenues could be cut by half.

In the coming months, we expect to see a consolidation of energy players, particularly on the retail market where the number of players had increased significantly, climbing above 100 or 200 providers in the UK and Spain, respectively, or in renewable energies stimulated by the appetite of oil majors looking for diversification.

**Takeaway: Solid Utilities or Oil and Gas companies should prepare for M&A opportunities.**

## Strategy

Managing operations during this crisis and beyond requires energy and utilities organizations to consider a wide range of factors that will affect the near- and long-term strategy.

In the short term, with significant revenue decreases, all companies will reduce their OPEX and CAPEX in order to maintain cash positive positions. At the same time, energy players should define their expense reduction plans to prepare for an economic rebound. Oil and gas companies have already announced more than 20 percent reduction in Exploration and Production expenses. However, some question if this approach lacks long-term sensibility. With less exploration how will these organizations renew their oil fields portfolio? Should they accelerate their shift towards renewable energies, storage, e-mobility and electricity retail markets? It is likely that the most robust of them will continue or accelerate this policy. For the most fragile, this is less certain.

Shale oil producers with high level of debt will be strongly hit by the low oil prices. Many could not survive. Will they be acquired or simply fold?

**Takeaway: Oil and Gas companies and Utilities should urgently rethink their strategy to address these complex factors.**

# Conclusion

As in other sectors, energy players are facing an unprecedented crisis. Utilities although impacted show their resilience especially the electric utilities because during this crisis, electricity has been more necessary than ever.

Oil players are facing a double crisis, the Covid 19 and the one related to the collapse of oil prices. The survival of some of them (notably the shale oil operators) is not guaranteed. All

must adapt or even reinvent themselves to emerge victorious from this difficult period.

We hope that the world will emerge soon from this unprecedented crisis and that it will change for the better

## References

- 1 <https://venturebeat.com/2020/04/20/utilities-energy-usage-covid-19-ai-machine-learning/>
- 2 Global Energy Review 2020
- 3 CNN opinion March 10 2020
- 4 IFOP mid April 2020





## About Capgemini

Capgemini is a global leader in consulting, digital transformation, technology and engineering services. The Group is at the forefront of innovation to address the entire breadth of clients' opportunities in the evolving world of cloud, digital and platforms. Building on its strong 50-year+ heritage and deep industry-specific expertise, Capgemini enables organizations to realize their business ambitions through an array of services from strategy to operations. Capgemini is driven by the conviction that the business value of technology comes from and through people. Today, it is a multicultural company of 270,000 team members in almost 50 countries. With Altran, the Group reported 2019 combined revenues of €17 billion.

Learn more about us at

[www.capgemini.com](http://www.capgemini.com)

**People matter, results count.**

The information contained in this document is proprietary. ©2020 Capgemini.  
All rights reserved. Rightshore® is a trademark belonging to Capgemini.