

Will Europe remain a renewable energy powerhouse after the pandemic?

Global renewable energies: continued ascension despite the COVID-19 pandemic

Paris, September 8, 2020 – The COVID-19 health crisis has had a negative impact on short-term global renewable energy development, and challenges remain in the medium- to long-term, according to a recent Coface study.

Renewables have strengthened rapidly in the last 20 years, particularly in power generation, increasingly gaining market share from traditional energy sources such as coal, oil, and nuclear. The COVID-19 crisis has had a significant impact on this segment of the energy sector, as the pandemic disrupted supply chains and labour availability. Access to funding was also hit hard. These recent trends have affected projects that had already been approved, as well as other projects in the pipeline.

Low demand and oversupply during lockdowns across the world have pushed electricity prices into negative territory. Consequently, utilities that mainly use traditional energy sources face a "new reality".

Other sectors are expected to increase their use of renewable energy, particularly those like chemicals or metals, whose activities make them heavier polluters that must comply with stricter regulations. These sectors also need to adapt to stiffening public attitudes to pollution, and the growing likelihood of legal action.

- Renewable energy has gained momentum in recent years, increasing from 21.8% of total global installed electricity capacity in 2000 to 34.7% in 2019.
- A knock-on effect of the COVID-19 pandemic is that global CO₂ emissions are expected to decline by roughly 8% year-on-year (YoY) in 2020, to the level they were a decade ago.
- China is a major producer of renewable energy and a global leader in the energy transition.
- In Latin America, integrating renewables into the grid is no longer optional.
- For supply chains, the COVID-19 pandemic has capped the rise of renewable use, and will cause capacity additions to decrease by 13% in 2020, after ten years of steady growth.
- High electricity price volatility is anticipated going ahead
- The chemicals, metals, paper, wood, and ICT¹ sectors are expected to be the largest users of renewable energy.

¹ For a complete list of sectors covered by Coface, see <u>https://www.coface.com/News-</u>Publications/Publications/Country-Sector-Risk-Barometer-Q2-2020-Quarterly-Update

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1. Developing renewable energy: no longer an option

According to the report, in the context of the COVID-19 pandemic, integrating renewables into the grid is no longer optional for governments worldwide, in both advanced and emerging economies, despite considerable challenges. This is the case in Latin America notably, where hydropower has historically been the biggest renewable energy source, and where the development of both solar and wind projects is accelerating due to their cost effectiveness. China is a major producer of renewable energy and a global leader in energy transition.

Since the beginning of the 21st century, renewable energy development has gained a significant foothold in the global electricity mix. According to figures from the International Renewable Energy Agency (IRENA), adoption of renewable resources has gained significant momentum, increasing from 21.8% of total global electricity installed capacity worldwide in 2000 to 34.7% in 2019, mainly thanks to the growing global consensus that a carbon-based economy is unsustainable. This is underpinned by the link between energy use and climate change². Moreover, fossil fuel availability and reserves are finite, and their price volatility can add to market uncertainties. There has also been a notable change in the renewable energy mix. While in 2000 hydropower accounted for 93% of total global renewable capacity, this ratio dropped to 47% in 2019 other sources, notably solar and wind, grew.

Year 2000 Year 2019 Bioenergy Non-Renewable (fossil fuels) Bioenergy Non-Renewable (fossil fuels) Hydropower Wind energy Solar energy Wind energy Renewable - other Renewable - other Non-Renewable (nuclear) Hydropower Non- Renewable (other) Non-Renewable (nuclear) Non- Renewable (other) **59**,3^{10,2} 16.3 20.2 57.9 65.2

Global electricity matrix – Installed capacity (percentage of total)

According to International Energy Agency (IEA) estimates, global CO₂ emissions are expected to decline by roughly 8% year-on-year (YoY) in 2020, to the level they were a decade ago. However, this is not a consequence of renewables development, but a knock-on effect of the COVID-19 pandemic. The renewable energy sector, while not immune from the spillover effects of the health crisis, is expected to show higher resilience compared to fossil energies and other sectors.

² Climate Change 2014 Report, the Intergovernmental Panel on Climate Change (IPCC), 2014. https://www.ipcc.ch/site/assets/uploads/2018/02/AR5_SYR_FINAL_SPM.pdf



The case of China

China is one of the countries that aims to lead this ongoing energy transition. The Made in China 2025 plan, first released in May 2015, seeks to shift China from being a low-end manufacturer to a high-end producer of goods. This requires an increase in renewable energy use, and promotes the entrance in the grid of large-scale renewable sources. As a reference, global investments in renewable energy amounted to USD 279.8 billion in 2017, with China accounting for 45% (USD 126.6 billion).

China's rapid development of renewable energy highlights the country's growing geopolitical influence. China's renewable investments mostly target OECD member states in Europe, rather than developing economies, and from 2010 to 2017, China's outbound EU investments in wind energy totalled USD 6.8 billion³. This long-term trend is unlikely to be reversed by the COVID 19 pandemic.



Despite the challenges, renewables must be developed: the case of Latin America

Even at the beginning of the 21st century, many Latin American countries already sourced most of their electricity from renewable sources, thanks to the continent's large "hydraulic potential" (the amount of usable energy from river waters per unit of time). In 2000, 54% of Latin America's electricity matrix was hydroelectric.

In the three biggest Latin American energy markets - Brazil, Chile and Mexico – renewable electricity capacity registered relatively strong growth between 2000 and 2019.

As in other global markets, **the sector is expected to be heavily impacted by COVID-19 (postponement of investment and new power auctions)**, as Latin America has been among the regions that struggled **most to control the pandemic**. Nevertheless, in the medium- to long-term, the overall global outlook for renewables development remains bright. The success or failure of its future development will depend on the local political and regulatory environment.

³ Wind Energy: How long will the wind stay in the industry's sails?, Coface, June 2018 <u>https://www.coface.com/News-Publications/Publications/Wind-energy-how-long-will-the-wind-stay-in-the-industry-s-sails</u>

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Source: Irena - International Renewable Energy Agency

The report outlines how Chile appears to be the best-positioned Latin American market for renewables development in the coming years. According to estimates from the country's energy regulator Comisión Nacional de Energía (CNE), the country has the potential to develop 40 GW of wind, 12.5 GW of hydropower, over 1,000 GW of solar, and 2 GW of geothermal energy. With a rock-solid regulatory reputation, Chile is seen as more committed to the global decarbonisation transition than Mexico and Brazil.

2. Renewable energy development: multiple challenges lie ahead

While renewable energy infrastructure projects have been on the rise since the beginning of the 2000s, and were bracing for another year of steady growth in 2020, the COVID-19 shock turned expectations on their head. According to the IEA⁴, the COVID-19 pandemic has limited what was a steady increase of renewables, and capacity additions are expected to decrease by 13% in 2020, after ten years of steady growth. However, 2021 is likely to see rebound, with growth of 17%, mainly thanks to delayed projects coming back online.

The 2020 decrease in new renewable capacity will be biggest in Europe, due to stringent lockdowns in several countries, and a smaller auction appetite from investors. In July, the Bloomberg New Energy Finance (BNEF) study noted that during the first semester of 2020, offshore wind final decision investments grew by 319% compared to the same period of the previous year, pushing global renewables investments to grow by 5%. However, solar and onshore wind, which represents the bulk of renewable capacity in Europe, decreased by 12% and 21% respectively. Offshore wind projects were bigger, as their cost has continuously decreased since 2012, and developers were rushing to benefit from Chinese subsidies that are due to end in 2021.

Moreover, lockdowns across the world brought supply chains almost to a halt, as many plants were shut down for safety reasons, notably in China, an essential global actor in renewable energy generation, where lockdowns led to disruption to the entire global value chain. Labour shortages were also felt, as many countries closed their borders to foreign workers. We expect these shortages to dissipate gradually

⁴ Renewable Energy Market Update, IEA,2020. <u>https://www.iea.org/reports/renewable-energy-market-update</u>

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towards the end of the year, as plants continue to reopen. However, the impact will still be felt until the end of the year for many ongoing projects.

High electricity price volatility looking ahead

As economic growth was impacted by the sudden implementation of lockdowns in several parts of the world, we expect electricity consumption to decelerate. This is particularly true for many emerging markets, where the manufacturing sector in not mature and highly energy-intensive. OECD countries are on the opposite side of the spectrum, where economic activity is less dependent on energy use, thanks to higher efficiency enabled by the manufacturing sector and the preponderance of the services sector⁵. However, while this decoupling is well known, a recession, which Coface anticipates for 2020 in many countries, will be followed by lower electricity demand.

Will Europe remain a "powerhouse" for renewable energy after the pandemic?

The European Union has pledged a multiyear plan to make its economy sustainable, by using its resources more efficiently and fighting pollution⁶. Renewables are one of the main targets, and the European Commission (EC) has said it will push for higher integration of renewables into the blocs various electricity grids, and to finance research and development. While these propositions were warmly accepted by the renewables industry as a whole, they fell short of what the industry considered a true answer to the challenges of COVID-19. Developers are urging the EC and member States to ease permit allowances⁷ and access to financing. At the time of writing, there are no detailed insights about renewable energy development plans in the pan-European green recovery project announced in June 2020.

Keeping an eye on integration of renewables into the grid

There is a pervading (and not necessarily accurate) perception that renewables have a bad impact on utilities. The intermittency of renewable electricity generation has pushed utilities to commission (mostly natural gas) 'backup plants', particularly in support of wind energy. In fact, by balancing power with neighbouring countries, **large-scale electricity grids can counter the negative effect of intermittency**.

The lack of continuous electricity generation from the renewables side, particularly when demand is higher, has an impact on utilities' profitability. This has led companies around the world to propose the integration of battery storage. to smooth supply and match demand. **Batteries could be a game changer, as IS already the case in the automotive industry with the growth of plug-in electric and hybrid vehicles.** One reason behind this widespread adoption is that the cost of batteries is likely to drop over the next decade, as more and more companies rush to develop their own supply with resultant economies of scale. Batteries will be integrated into utilities' grids in order to help them balance intermittency.

⁵ <u>https://www.eia.gov/todayinenergy/detail.php?id=33812</u>

⁶ https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en#latest

⁷ https://www.evwind.es/2020/06/11/eu-recovery-plan-its-time-to-roll-up-our-sleeves-for-a-green-recovery/75083

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Chemicals, Metals, Paper, Wood and ICT⁸ are expected to be the largest users of renewable energy

Corporate sourcing of electricity generation from renewables is on the rise, notably in Europe, Asia and North America, but also in emerging countries. According to a 2018 study from the IRENA⁹, the main sectors sourcing their electricity from renewables are activities linked to materials, that is to say mainly chemicals, wood (pulp production activities) and paper, mining and metals. This is mainly because the capital intensity and the polluting aspects of their operations are pushing them not only towards renewables, due to tighter regulation and the impact of activists and public opinion. They are also seeing that renewables help them significantly lower their costs.

Corporate Social Responsibility (CSR) is hugely important factor in companies' reputations, and contribute to a positive marketing brand image for a company. High CSR values also help mitigate legal risk, particularly when it emanates from action by environmental associations. These actions can be a devastating blow given the growing number of investors actively seeking to divest from highly polluting sectors.

Around 39% of electricity sourced from renewables come from self-generation, that is to say when a company produces its own electricity. Many companies in high-consuming sectors generate their own electricity. While electricity from renewables accounts for only a tiny part of this type of production, the share is expected to grow in the coming years. Retail giant Amazon which has built and is building utility-scale solar projects in the US and in China for that purpose¹⁰.

A full copy of the report is available on the Coface website: <u>https://www.coface.com/News-</u> <u>Publications/Publications/Panorama-Global-renewable-energies-climb-despite-COVID-19</u>.

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⁸ For a complete list of sectors covered by Coface, see <u>https://www.coface.com/News-</u>

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⁹ <u>https://irena.org/publications/2018/May/Corporate-Sourcing-of-Renewable-Energy</u>

¹⁰ <u>https://press.aboutamazon.com/news-releases/news-release-details/amazon-announces-five-new-utility-scale-solar-projects-power</u>

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