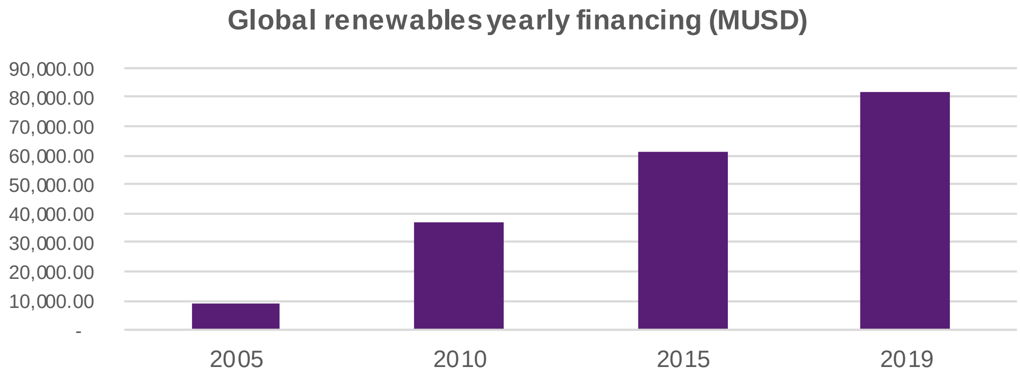
Covid-19: impact on renewables

The renewables sector has become the largest sub sector of the infrastructure market, how has it been impacted by Covid-19?

The first renewables transactions were seen in the late 90's, they have continued to gain momentum, increasing nine since the mid-2000, as demonstrated by the graph below. This illustrates the effort to shift away from fossil-fuel energy which has taken place at several levels: global (COP 21); regional (EU targets); national; and state (New York, California…).

This trend has been reinforced by the decreasing cost of renewables. This was initially supported by the onshore and solar wind farms, followed then by offshore wind farms, and recently floating solar and wind farms and batteries. The next green energy technology revolution may be hydrogen. This sub-sector should offer plenty of investment opportunities.



The nature of risks has evolved to adapt to this maturing sector

This subsector was initially financed through subsidies because the technology was experimental and expensive requiring high capital expenditure. The costs have then fallen because of higher volume of production and more competition

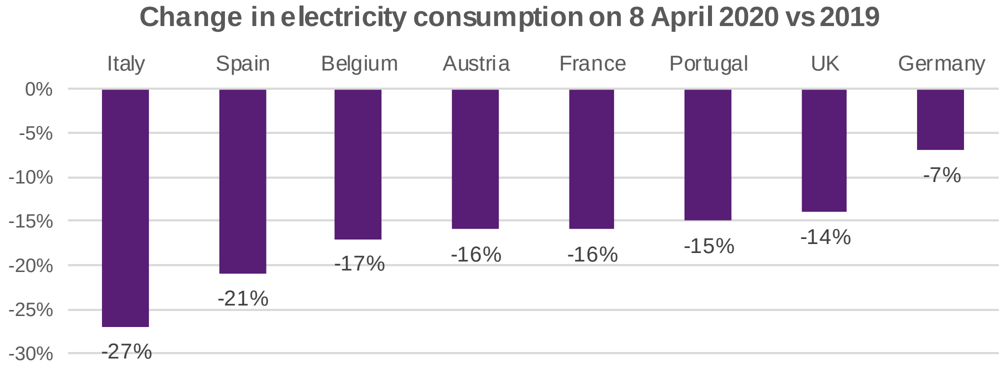
This continued drop in costs for renewable energy led to widespread "grid parity" in the market. This paved the way for the development of subsidy-free projects since the beginning of 2018, when Portugal saw its first ever unsubsidized financing of a photo-voltaic farm. This was followed by Italy and Spain. Later in 2018, the first ever unsubsidized onshore wind project was launched in Spain, followed by a similar project in Finland. By the end of 2018, the Netherlands had launched its second subsidy-free auction for offshore wind.

This has reshaped the risk profile of renewables transactions, bringing merchant risk and corporate purchase agreement risk into the equation.

Could Covid-19 change the dynamics of Renewables?

Significant impact on demand and prices:

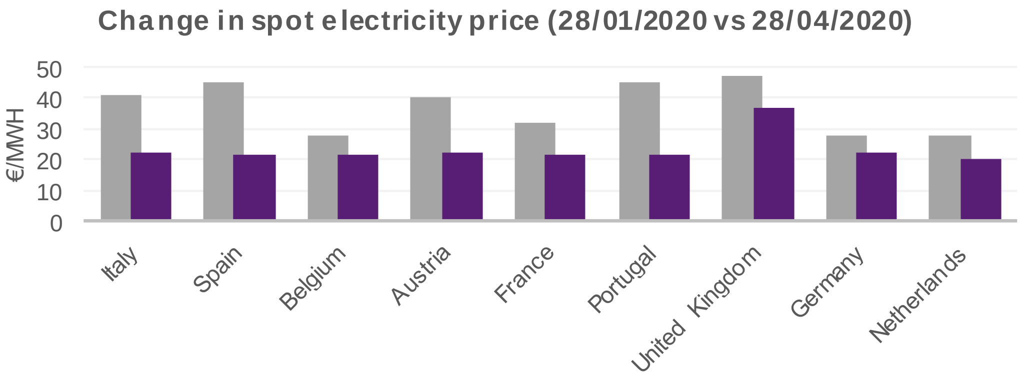
The Covid-19 impact on the demand for electricity has already been substantial.



Sources: Bruegel, ENTSO-E, April 8 2020.

The International Energy Agency expects Covid-19 to result in the biggest decline in electricity consumption since the great depression. This decrease has already resulted in a falloff in the price of electricty in most European countries. Prices were down from roughly 40€/MWh before the lockdown to less than 20€/MWh in March, and even less than 10€/MWh in Aprili.

Negative electricity prices have even become commonplace. In auctions for the European Power Exchange joint Germany-Luxembourg market prices were negative five times over April 2020, more than for all of 2019.



Source: RTE France, April 28, 2020.

The same decrease in prices has been observed for oil & gas, with historically negative prices in April.

The renewables sector has developped some immunity:

Existing renewable transactions with guaranteed fixed prices should not be impacted by the crisis as they benefit from a fixed-purchase price and priority dispatch on the network. These transactions should be immune as long as governements ensure that the provider is paid the difference between the market price and the set-rate.

The few existing transactions without subsidies but with power purchase agreement (with a corporate) should not be impacted as long as the corporates can pay for such agreements.

It is still too early to see the full impact of the outbreak on renewable energy. Like in other sectors, there may be some construction delays due to the Covid-19 impact on logistics. According to the wind power association WindEurope, delays in constructing new renewable energy plants are expected. There could also potentially be reductions in investments in the short term.

The crisis has revealed the strengths and the remaining challenges of this sector:

Renewable surge in Europe

Over the past few months optimal weather conditions pushed wind and solar output to record levels, setting off negative spot and day-ahead electricity prices in France, Germany, Ireland and UKii.

During this period of reduced activity, the proportion of Euope's renewable-based electricity in the power network dramatically increased, with supply outstripping demand at times. Coal-fired power generation was even temporarily shut down in countries such as Germany, Spain and the United Kingdom. The technology group Wartsila estimate that the share of renewable energy reached 43% across Europeiii, an increase of 7% compared to this time last year. The data also showed coal-based power generation fell by more than 25% across the European Union and the United Kingdom in the first three months of 2020 year-on-year. Coal power plants typically delivery bursts of power to the grid when demand increases, which isn't happening right now.

But investments are needed to support next renewables growth

This could give an indication of what the European power system of the future might look like.

The European Grid has demonstrated its ability to operate with a high share of renewable energy, even if this has been in a low demand situation. New investments will have to be made to reinforce and reorganize the European grid to withstand a high proportion of renewable energy in high demand environment.

Could Covid-19 spark a renewable energy boom or bust?

The current situation has pushed the renewable energy prices above grid parity and has increased the attractiveness of electricity produced by oil & gas. Will post confinement electricity prices return to pre-crisis levels? Will the trend of low oil & gas prices last after the crisis?

Covid-19 could push renewable energy down the list of priorities for some countries. But many governments still have ambitious targets in place and the higher proportion of renewable energy during this crisis could be a signal for the future. For example, the German government plans to ensure its energy mix consists of 65% renewable energy by 2030. During the Covid-19 slow down Germany has already seen their share of renewables reach 60%, up 12% from a year ago for period March 10 to April 10, coal generation also fell by 44% over the same period according to Wartsila data.

Will governements want to, and be able to afford to make good on their climate change ambitions? A key question facing renewables investors is how governments will embed enrivonmental priorities in their post-Covid-19 recovery plans.

We believe that the European Green deal, which aims to make Europe climate neutral by 2050, will be strengthened by this crisis. There is an increasing push to improve the share of renewables energy, energy independence, and European interconnectvity. But this will only happen if in each and every european country policy makers have the will and the courage to impose these new green deals. This is also true outside Europe.

Even China has included some green incentives in recent stimulus packages. While President Trump has brushed off warnings on global warming, he has cut red tape on environmental reviews, paving the way for some major renewable energy infrastructure projects to go-ahead. This is also in line with some already existing initiatives at the state level.

[i] Source: France Stratégie, données EEX-spot
[ii] Source: The Union of the Electricity Industry - Eurelectric, May 15 2020 https://www.eurelectric.org/news/covid-19/
[iii] Source: Wärtsilä, May 2020, www.wartsila.com/energy/transition-lab

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