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## Sustainability | Europe

## Energy Security and EU's Decarbonisation Pathway

We consider how improving energy security across Europe may impact the transition to a low carbon economy.

**The Russia-Ukraine Conflict has raised the issues of energy security and affordability, leading to investor questions around the potential impact on the energy transition.** Around 30-40% of Europe's gas demand has historically been fulfilled by gas imports from Russia. The EU is expected to implement initiatives to reduce the reliance on gas from the region, which could in fact accelerate decarbonisation, in our view.

**Short term, CO2 emissions are likely to go up due to more coal power gen....**

Constraints on the supply of gas into Europe could result in an increase in coal power generation over the short term. The carbon intensity of coal is ~2.25x higher than gas at ~900 g/kWh versus 400g.<sup>1</sup>

In 2021, ~16% of the EU's electricity came from both coal and gas, 39% from renewables, 27% from nuclear and 2% from other. As such, using the above carbon intensity metrics, for every percentage point of power generation that switches from gas to coal, the average intensity of power generation for the EU would increase by ~2%.

**New investment in gas and gas infrastructure will be needed in Europe.**

Germany has announced plans to build two LNG terminals in order to be able to receive imports from the US, for example. Elsewhere, it may be possible to increase production from the Groningen gas field, although the Netherlands' PM has stated that it *"is the very very very last thing we would do"*.<sup>2</sup> Longer term, MS forecasts ~160bcm of additional LNG supply by 2030, with potential upside from US permitted projects awaiting long-term supply agreements. However, new facilities have a 3-5 year lead-time to delivery. See [Global Gas & LNG: 4 Stocks to Play the Global Gas Rally \(10 Jan 2022\)](#).

**But this is about supply - not demand - and thus doesn't impact direct**

**emissions.** The EU's climate goals are to cut GHG emissions by at least 55% by 2030 vs 1990 and achieve carbon neutrality by 2050. As such, the EU is focused on direct emissions from the combustion of fossil fuels in the region, as opposed to the extraction of high carbon intensive commodities, such as gas. Changing the source of fossil fuels is thus not contradictory to the EU's climate goals.

**Diversifying sources of energy could be a positive for renewables ...** Our Utilities' team forecasts renewable capacity to almost double across the EU between 2020-2050. As Exhibit 1 shows, though, the biggest annual expansion is not until 2028-2030. We wonder whether energy security concerns may bring forward some of the investment and increase total capacity additions over the next

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decade as well. Indeed, [Germany](#) has brought forward by 15 years its plans to reach 100% renewable power (now 2035).

EDPR, Orsted and Acciona Energia are the three European Utilities most exposed to renewable energy across MS coverage. In addition, as Rob Pulleyn argues in [Power & Gas Implications for European Utilities: #2](#), there could be an incrementally positive EPS/cash flow outlook for RWE given the German government's potential acceleration of Renewable targets and likely persistent coal usage in the power mix. However, the likely delay to coal closure (not confirmed) could potentially reduce the potential for early lignite exit and the associated valuation re-rating we expect to the level of pure-play Renewable peers.

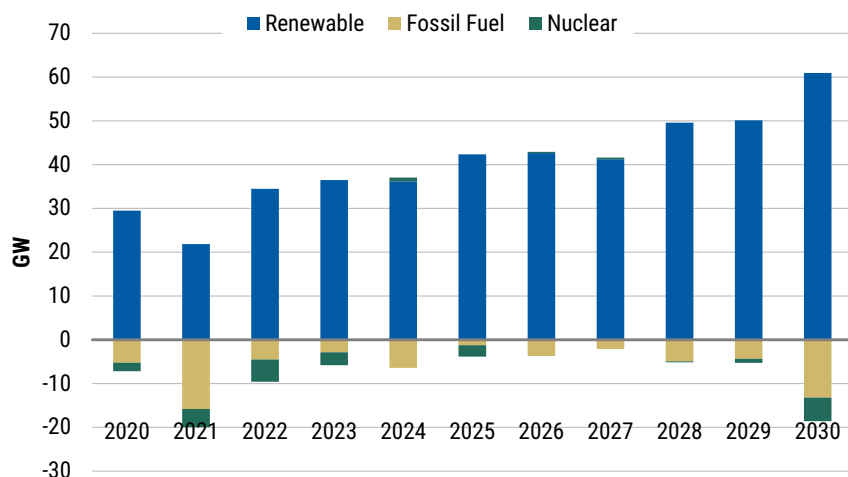
**...and also lead to lower power prices.** Prior to the current crisis, renewable power generation was cost competitive with gas, as outlined by the IEA's LCOE analysis from December 2020 (Exhibit 2). Over the last year, the price of gas has increased by up to 10x (Exhibit 3).

**Clearly there will be challenges - namely the stability of the grid and energy storage.** The current distribution and transmission grids that operate globally were not built with renewables in mind. Once solar and wind reach ~35-50% of total power generation, there will need to be more significant investments in the grid to ensure sufficient stability. Prysmian and Nexans are two companies that supply the cabling to the grid. We also expect storage facilities to grow rapidly in order to 'balance out' the intraday supply imbalances caused by the growth in solar, and anticipated growth in wind power.

**Could there be more investment in nuclear?** Over the next decade, our Utilities team forecasts a 22 GW reduction in nuclear capacity across the EU. However, the UK has outlined new nuclear as playing a role in its Net Zero Strategy. In addition, since we wrote [Is Nuclear The Solution for Low Carbon Power?](#), France has announced plans to [build upto 14 new reactors](#). We also note that some forms of nuclear power are to be included in the [EU Taxonomy](#). That said, nuclear still has its challenges, with long lead times necessary and [cost overruns and time delays](#) evident in a number of projects globally.

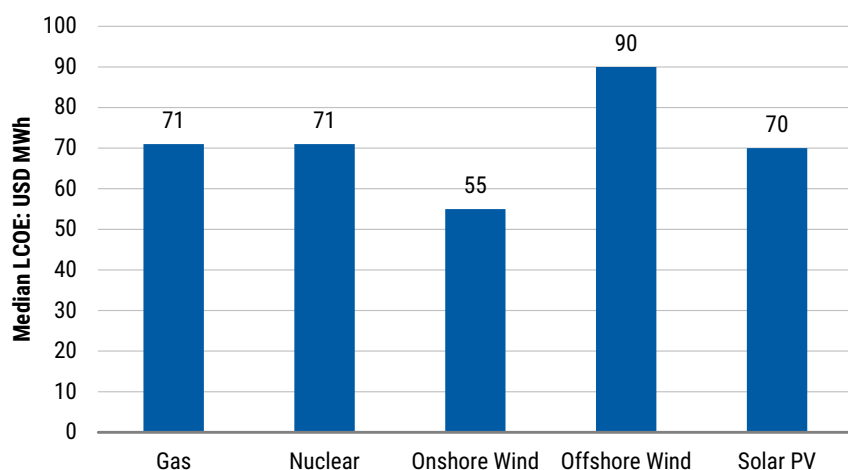
**There could also be an increased focus on energy efficiency.** One way to improve energy security and reduce emissions is to simply use less energy. Last year's revision of the Energy Efficiency Directive (EED) announced 2030 goals of reducing the EU's final and primary energy consumption by at least 36% and 39% versus 2007. This compared to previous policy ambitions of 32.5%. Companies exposed to the theme include Belimo, Kingspan, Rockwool. Saint-Gobain, Signify, Legrand and Sika. See [Sustainability: EU Fit for 55 Package: Roadmap to 2030 \(14 Jul 2021\)](#)

**Exhibit 1:** Incremental power generation capacity across the EU



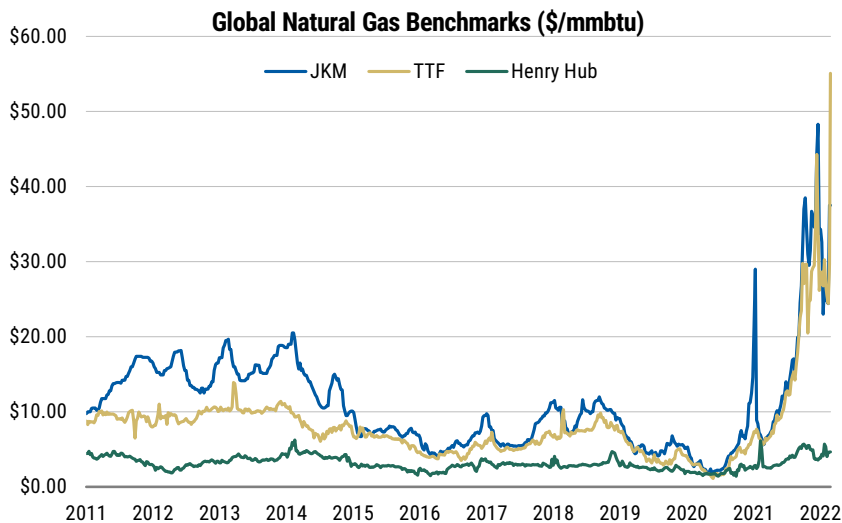
Source: Morgan Stanley Research estimates

**Exhibit 2:** Prior to the current crisis, renewable power was already competitive with Gas



Source: IEA

**Exhibit 3:** Gas prices have increased by up to 10x over the last year



Source: Bloomberg



# Endnotes

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1 Greenhouse gas emissions from fossil fuel fired power generation systems, European Commission

2 Reuters.

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|--------------------------|-------------------|---------------|----------------------------------|-------------------|----------------------------|---|--------------------------------|
|                          | COUNT             | % OF<br>TOTAL | COUNT                            | % OF<br>TOTAL IBC | % OF<br>RATING<br>CATEGORY | COUNT   | % OF<br>TOTAL<br>OTHER<br>MISC |
| <b>Overweight/Buy</b>    | <b>1494</b>       | <b>42%</b>    | <b>386</b>                       | <b>46%</b>        | <b>26%</b>                 | <b>645</b>  | <b>41%</b>                     |
| <b>Equal-weight/Hold</b> | <b>1524</b>       | <b>43%</b>    | <b>372</b>                       | <b>44%</b>        | <b>24%</b>                 | <b>708</b>  | <b>45%</b>                     |
| <b>Not-Rated/Hold</b>    | <b>0</b>          | <b>0%</b>     | <b>0</b>                         | <b>0%</b>         | <b>0%</b>                  | <b>0</b>  | <b>0%</b>                      |
| <b>Underweight/Sell</b>  | <b>547</b>        | <b>15%</b>    | <b>85</b>                        | <b>10%</b>        | <b>16%</b>                 | <b>209</b>  | <b>13%</b>                     |
| <b>TOTAL</b>             | <b>3,565</b>      |               | <b>843</b>                       |                   |                            | <b>1562</b>   |                                |

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