

European and US utilities take center stage in decarbonization drive

By Pierre **GEORGES**
& Gabe **GROSBERG**

As the energy transition gathers pace, utilities are making significant investments for the future. But achieving net zero targets will be far from straightforward.

If the impact of global warming is to be limited to 2 degrees above pre-industrial levels, rapid decarbonization will be crucial. According to S&P Global Platts Analytics, all energy-intensive sectors need to drastically cut their carbon emissions, mainly by electrifying their industrial processes and transitioning, mostly sourced from low-carbon energy sources such as renewables. As such, there is a strong push towards increasing global installed renewables capacity – yet ensuring this happens both quickly and affordably is posing problems.

Utilities raise capital to invest in renewables

Utilities have a central role to play in the transformation of the energy sector. In Europe, many regulated utility companies are already well-aligned with the growing political push towards decarbonization and have begun to make significant investments in renewables.

Indeed, the European utilities sector, which continues to exhibit strong credit quality, is already in a phase of strong innovation. S&P Global Ratings expects this will continue as policy initiatives provide clearer guidance on the investments required – not only in terms of renewables production, but the infrastructure requirements, such as network upgrades, necessary to support it.

Meanwhile, US utilities continue to raise equity and hybrid capital to fund renewables investments, with some US companies even disposing of non-core assets to raise funds. Indeed, capital expenditure for regulated electric, gas, and water utilities reached a record high of over \$160bn in 2020. Yet such high levels of spending have taken their toll on entities' already low financial cushions. As such, about 20% of S&P's ratings on US-regulated utilities now carry a negative outlook.

Rising costs and reliability issues present hurdles

While utilities on both sides of the Atlantic are making a clear financial commitment to decarbonization, renewables

still face a number of obstacles when it comes to widespread adoption.

Increasing costs of raw materials, including copper, aluminum and steel, have seen manufacturing costs deviate from the expected long-term decline of about 40% by 2030. Meanwhile, ongoing supply chain issues – which have affected several economic sectors since the initial outbreak of COVID-19 – have also contributed to cost inflation. S&P Global Platts Analytics anticipates commissioning costs for solar photovoltaic plants will increase by up to 10% in 2021, while that the cost of offshore and onshore wind projects will grow by 4% and 8% respectively by the end of the year.

Furthermore, doubts remain about renewables' reliability to provide baseload power needs. Wind and solar power are intermittent energy sources, and cannot produce energy around the clock, meaning they give way to an increasing risk of blackouts in the event of extreme weather events.

Certainly, low wind levels have contributed to power outages in Northeast China and led the UK to switch to higher-emitting coal-fired electricity generation in the summer of 2021. Utilities will need to mitigate intermittency risks by matching renewables rollout with solutions that boost system reliability, such as batteries, flexible baseload generation and transmission upgrades.

Beyond operational concerns, the energy transition also faces political and social sensitivities – not least with respect to energy affordability. Recent market volatility has seen oil and gas prices climb to \$80/bbl and \$28/mmBtu respectively. This could come at a cost for consumers, and put pressure on governments to take action to mitigate the social implications. This was already the case in Spain, where the government recently proposed a law that would allow it to claw back billions from utility companies over the next year, before partly reverting the decision. >

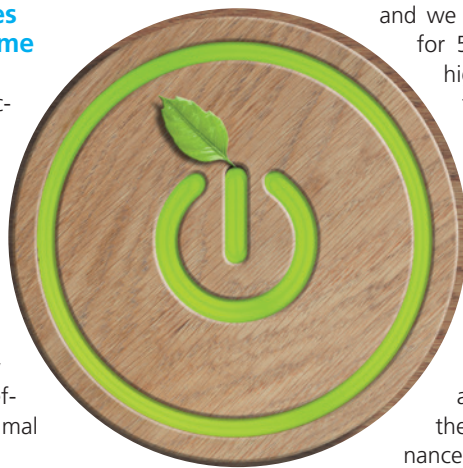
S&P Global Platts Analytics anticipates commissioning costs for solar photovoltaic plants will increase by up to 10% in 2021, while that the cost of offshore and onshore wind projects will grow by 4% and 8% respectively by the end of the year.

For utilities, the European Commission’s “Fit for 55” package is likely to provoke an investment super cycle as renewable generation fleets will need to be significantly expanded, and energy networks upgraded in order to meet the larger goal.

Should such actions become more commonplace, they could undermine utilities’ appetite to make the necessary investments to decarbonize the energy system. Meanwhile, escalating prices for the consumer could result in waning political support and give way to social and political backlash.

Policy initiatives seek to overcome challenges

As renewables account for an increasing share of the energy mix, governments will therefore need to be careful to ensure that the transition is achieved in a way that is fast and efficient with a minimal social impact.



In Europe, the European Commission’s “Fit for 55” package – which aims to reduce greenhouse gas emissions by 55% from 1990 levels by 2030 – is a wide-ranging plan encompassing energy, transport and taxation policies. Achieving this ambitious goal will require the continent to add 45-55 gigawatts (GW) of renewable electricity generation capacity per year (for context, 30GW were added in 2020).

The plan aims to deploy the EU’s regulatory capabilities to encourage companies in relevant sectors to innovate and decarbonize, while also prompting change at a consumer behaviour level. For utilities, this is likely to provoke an investment super cycle as renewables generation fleets will need to be significantly expanded, and energy networks upgraded in order to meet the larger goal.

Under the plan, the electrification of final energy demand – which includes sectors such as transportation – would rise to 30% by 2030, up from 25% today. By 2050, this figure would further rise to 57%.

Naturally, this shift implies a significant growth in demand for electricity, and we anticipate that “Fit for 55” should support high power prices in the long run, even if the large-scale roll-out of renewables could ultimately depress the average power price due to their low marginal costs. Crucially, the package also focuses on the mobilization of finance through its Social Climate Fund to mitigate the social impact of the energy transition.

The USA has set similarly ambitious decarbonization goals. President Biden’s clean energy framework targets a full decarbonization of the national power market by 2035, and requires renewable capacity additions to double from 15GW per year in 2020 to 30GW per year over 2021-2025, and then double again to 60GW over 2026-2030. The \$1.75tn Build Back Better Act, should further boost investments in power grids.


This spending bill is supplementary to the \$1.2tn Bipartisan Infrastructure Framework, now signed into law, that focuses on rebuilding physical infrastructure such as roads, bridges, outdated water infrastructure and public transport networks.

Elsewhere, while China’s energy transition still lags behind those of the USA

and Europe, its big five central power generation groups have announced that the country will add 75-80 GW of total renewables capacity during the current Five-Year plan (2021-2025), more than doubling the pace of growth seen in the preceding period.

The road to decarbonization will be far from straightforward. A dramatic increase in renewables installed capacity will be central to ensuring countries remain on-track to achieving their goals – while making sure negative social repercussions are kept to a minimum.


As key players in the global energy sector, utilities will play a central role in ensuring net zero ambitions become a reality. As such, clear and effective policy measures that determine where – and how – investments are most effective will be crucial to supporting the sector.



Pierre Georges

.....

Pierre Georges is a Senior Director and Sector Lead for the EMEA Utilities team at S&P Global Ratings based in Paris, France.



Gabe Grosberg

.....

Gabe Grosberg is a Senior Director and Sector Lead for North America Regulated Utilities at S&P Global Ratings.