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SPOTLIGHT

European Utilities & Renewables

Tipping towards a green future

The energy crisis has put European renewables in the spotlight …

…as governments set increasingly ambitious goals and supportive policies

Europe is on track to exceed its 2030 wind and solar targets, in our view

This is a redacted Free to View version of a report with the same title published on 14 March 2023. Please contact your HSBC representative or email AskResearch@hsbc.com for more information.

Europe's renewable ambitions

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No excuse green focus

Utilities are front runners on ESG with Environment the predominant theme. The Energy Transition determines every aspect of a utility company's framework: sustainable growth; resilient risk-adjusted returns; effective (green) capital allocation; execution quality; and valuation.

Governance and Social are also important. A feature of the utility sector is a strong interplay between Governance (policy & regulation), Social (economy, affordability, local infrastructure) and Environmental (energy transition and adaptation) drivers.

Europe and the US plan to reach net zero by 2050. With electricity as the leading decarbonisation vector, electricity demand will double by 2050 and its generation needs to achieve zero carbon 10 years ahead of the wider economy, by 2040. Green gases and hydrogen (produced from renewables) complement electricity in decarbonising the economy. **There are two clear winners: Renewables and Electricity networks.**

There is little excuse for a utility company in Europe not to have a 1.5º aligned net zero path for power generation (scope 1); and indeed many utilities can do better and have pledged real zero carbon Scope 1 by 2030 (in 7 years). This is complemented by Scope 1,2,3 real zero by 2040. **For European Utilities, ambitious net zero targets are not only good for the planet, it is a strategic necessity**. The volatility and uncertainty of the last two to three years has made investors weary of complexity and favour a green focus. We expect this to continue.

Power Model

In the full note, we use our proprietary power model to forecast power generation - all technologies for Europe and the Americas, bottom up for individual countries reflecting policy ambition and actual developments, incorporating green hydrogen.

We forecast that Europe will exceed its increased 2030 wind and solar targets of 500GW and 600GW, respectively. The share of renewables rises to ~72% in the power mix by 2030 in our forecast. Including nuclear, this will bring the share of zero-carbon power generation to ~89% by 2030. Electricity demand will more than double by 2050 and Europe will achieve zero carbon power by 2038.

The United States is a key market for European Renewables developers and the market is in a frenzy. The US represents ~40% of renewables CAPEX on average over the next three years for large European renewables developers. US renewables benefit from enviable economics based on excellent resources and policy support. We expect electricity demand to almost triple and forecast zero carbon power generation by 2038. We expect renewables additions to rise to 120GW by 2030 to decarbonise power and then to be sustained at these levels via electricity demand growth and green hydrogen production.

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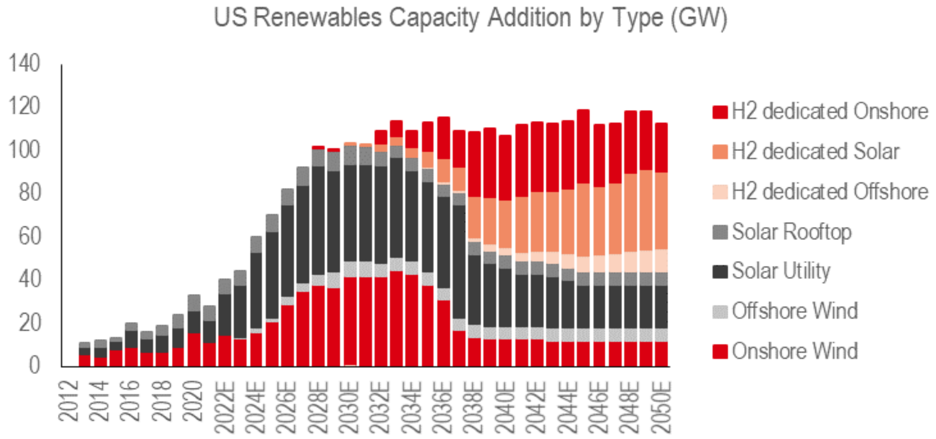


Source: BNEF, HSBC analysis and estimates

Renewables: A competitive frenzy

Renewables time and again exceed expectations. The gap between forecaster expectations, such as the IEA, and actual development has widened and renewables outperformed expectations more than usual in 2022. The idea of land and pricing barriers has been put to the side. **In fact, there is an abundance of cheap and green energy, redefining fundamentally how to think about energy**. **Today, zero carbon power is a question of system balance (security of supply), execution and more than anything competition.**

The clean energy disruption in power is close to the tipping point of its exponential growth along the S-Curve. At the tipping point all future growth is provided by the disrupting technology, i.e. renewables, and in the mass rollout that follows**, renewables as the disruptor quickly rise to dominance.** The pace of the disruption is always set by the disruptor and external shocks such as COVID-19 or Russia's invasion of Ukraine inadvertently only speed up the disruption.

This is not to say that we expect every segment and market to proceed smoothly and perfectly land on target every year. While the overall direction of travel is an acceleration there will be at times markets and segments that are facing challenges. There is also fierce competition as the distributed as well as the disruptive nature of solar and wind has generated many new players and fundamentally changed the competitive landscape of power generation. New players in power production include homeowners, companies, communal projects, small and mid-size independent power producers, financial investors as well as oil & gas companies. **Utilities are at the forefront of driving the renewables disruption in new markets**, such as the US. **Nevertheless, utilities are also being disrupted and look set to lose generation market share in home markets.**

Pricing environment: A tailwind

Europe's adaptation to lower Russian pipeline gas deliveries has been successful beyond most forecasters' expectations and confidence has increased that Europe can manage these transition years. This sets the scene for elevated (but not extreme) electricity prices with lower volatility. **Generation including renewables will continue to benefit from higher prices for some time via hedging (even after windfall taxes).**

Electricity grids are a green growth haven…… assuming the regulatory (and political) environment is favourable

Electricity networks are the green, often inflation protected, backbone of the energy transition and investments need to step up almost as much as renewables to accommodate growing electricity demand, renewables, to modernise and digitalise grids and to increase resilience.

Gas network role emerging

The outlook for gas network operators is very different from electricity as the role of the transported commodity – natural gas – will be much reduced in Europe's net zero ambitions

Gaseous fuels overall (from natural gas to hydrogen) will lose out to electric solutions in building heating & cooling and 2022 has likely tilted the balance in favour of electricity. Electric solutions will dominate building cooling/heating, especially in warm regions, such as parts of France, Spain and large parts of Italy, rendering (parts of) gas distribution networks obsolete.

Overall, the outlook for gas transmission networks to transition to hydrogen is better than for gas distribution networks. Nevertheless, the role is still emerging. How large are short- and medium-term investments opportunities for gas network operators due to security of supply concerns (e.g., storage, LNG, better European interconnectivity)? Can industrial hydrogen clusters or power users be served by regional networks or local production? Will there be hydrogen imports from North Africa or other neighbours via pipelines at scale?

This is a redacted Free to View version of a report with the same title that was published on 14 March 2023. The full note contains an in-depth look at the European Utilities sector, including our views on our entire European Utilities coverage universe, a discussion of our five-step company framework, a discussion of ESG aspects for the sector and our forecasts for renewable energy production in Europe. Please contact your HSBC representative or email *AskResearch@hsbc.com* for more information.

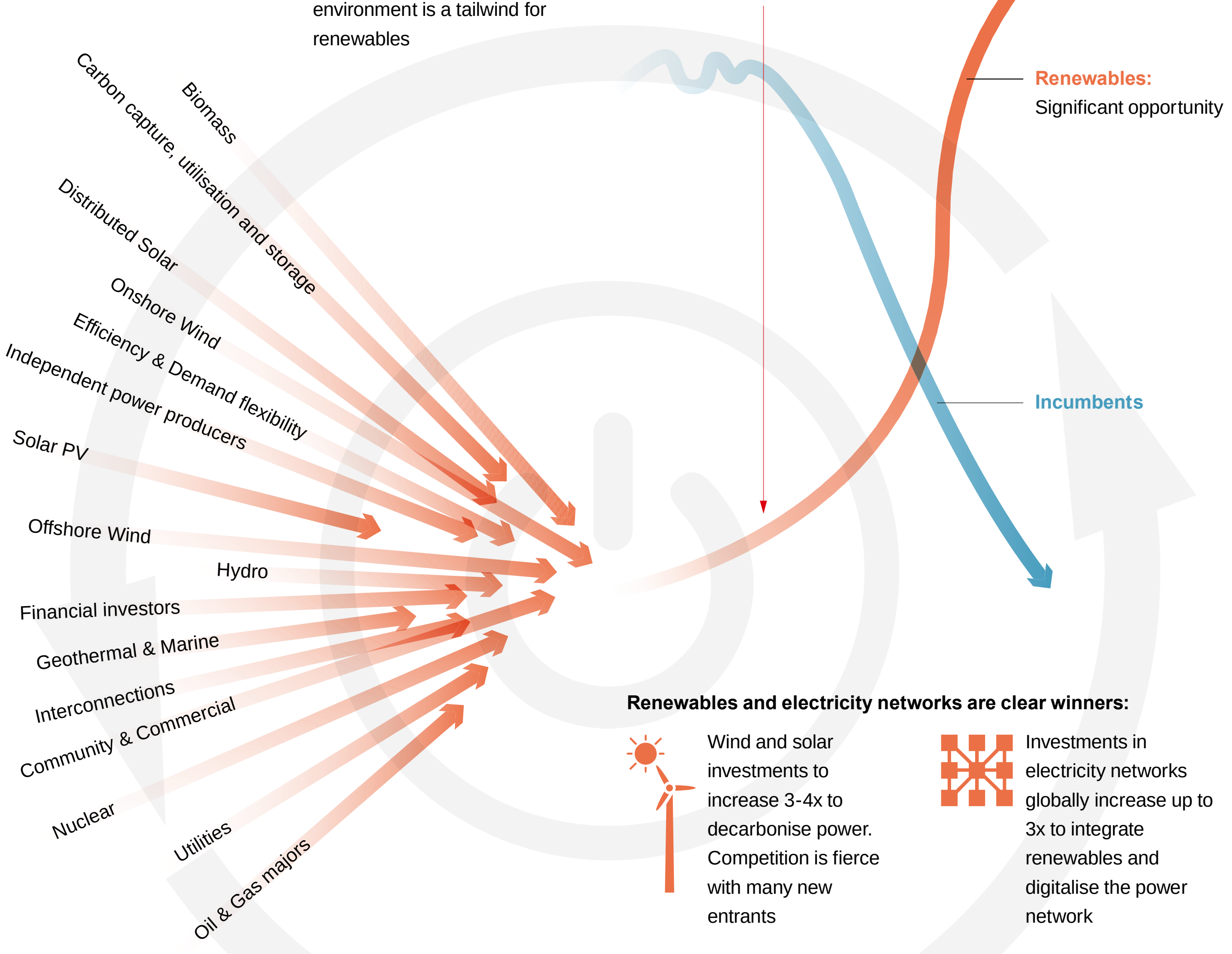
Energy Transition: rise of renewables

Powering net zero: we identify key factors that will differentiate sector winners

Renewables frenzy
Abundant energy means competition between countries, technologies and companies. Renewables have outperformed expectations in 2022

Energy crisis
The war in Ukraine is a powerful shock that has triggered unprecedented policy change to accelerate the Energy Transition. The high fossil pricing environment is a tailwind for renewables

Tipping point
Clean energy disruption of power is close to the tipping point of its exponential growth along the S-Curve. Renewables as the disruptor could quickly rise to dominance



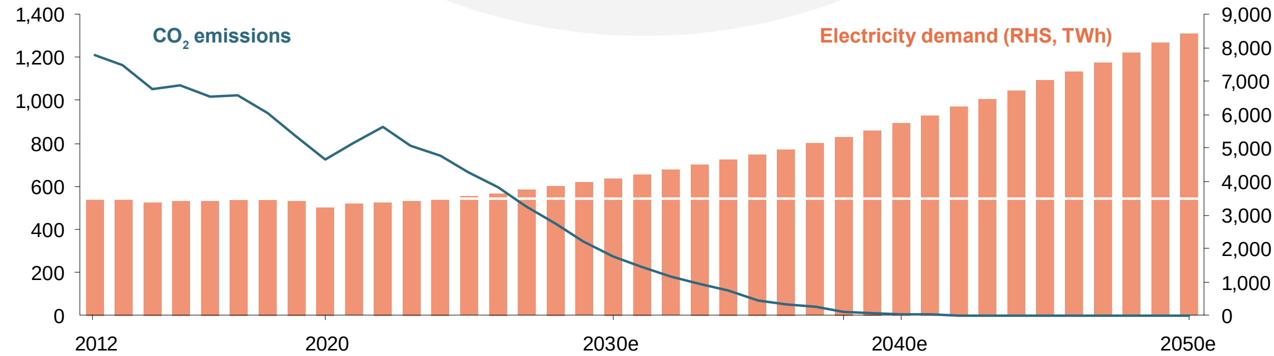
Renewables and electricity networks are clear winners:

Wind and solar investments to increase 3-4x to decarbonise power. Competition is fierce with many new entrants

Investments in electricity networks globally increase up to 3x to integrate renewables and digitalise the power network

Electricity demand should more than double by 2050 and Europe aims to achieve zero carbon power by 2038

Europe electricity demand and CO_2 emissions (Mt)



Source: BNEF, HSBC estimates

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