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Capgemini's World Energy Markets Observatory annual report 2021: Sustainable energy sourcing is key to prevent climate goals slipping further out of reach

- *As energy consumption and greenhouse gas emissions are on the rise again, the report calls for realistic, affordable, plans to accelerate energy transition based on undisputable scientific methods and accurate data to measure company net-zero trajectories and deliver real impact.*
- *The Energy and Utilities industry is facing a challenge: delivering against long-term pledges for carbon reductions whilst finding the balance between meeting stakeholders' expectations, providing affordable energy, and ensuring business continuity. This is accelerating its transformation.*

Paris, October 12, 2021 – [Capgemini](#) has published the 23rd edition of its annual report, the [World Energy Markets Observatory \(WEMO\)](#), created in partnership with [De Pardieu Brocas Maffei](#), [Vaasa ETT](#) and [Enerdata](#). The report analyzes the state and trends of electricity and gas markets and technologies across North America, Europe, Asia - including China and India - and Australia, and provides insights on progress in the fight against global warming and the ongoing energy transition. The report also explores the evolution of leading industry players and predicts major trends for the future. Key findings include:

- **Electricity spot markets are at record high levels**, linked to sustained demand, lower generation capacity margins, high gas prices, and, in Europe, high carbon prices.
- **Supply of renewable-based electricity has increased while renewable costs continued to decrease in 2020**: both solar and wind power generation capacities rose in 2020, representing 10% of the electricity generation market. The downward cost trend could reverse in 2021 and in the following years, as critical metal, equipment, and transportation prices as well as interest rates increase.
- **Growing momentum around green hydrogen, which has the potential to decarbonize an additional 15% of the world economy**. Green hydrogen is costly, around three times more expensive than fossil-based hydrogen; however, decreasing renewable electricity and electrolyser costs could lead towards parity by 2030.
- **Competition in the electricity and gas retail markets has largely recovered early 2021, however, presently, high energy prices are triggering consolidations**. Whilst utilities demonstrated financial resilience in 2020, oil and gas players were more severely hit, though many have now recovered thanks to higher demand and prices for oil and gas. Stakeholders pressure on oil and gas majors has accelerated their diversification towards electricity, renewables and e-mobility and reinforced their carbon neutrality commitments, particularly for European International Oil Companies (IOCs).
- **Energy and utilities players are moving quickly to decarbonize and harness the current energy transition to develop new models and reinvent themselves** in valuable ways. By digitizing and embracing low-carbon technologies. Many are attempting to find the right balance between meeting stakeholders' expectations and ensuring business transformation in competitive markets.



- Whilst the appeal for clean technologies, essential to energy transition, begins to intensify, it is crucial to remember that achieving this means **not** compromising on security of energy supplies or energy affordability.

According to Colette Lewiner, Energy and Utilities Senior Advisor at Capgemini:

"The impact of COVID-19 has been important. However, as we saw in the first half of 2021, the pandemic did not lead to a sustained decrease of greenhouse gas emissions compatible with the 1.5°C global warming objective for 2100.

Efforts on low carbon technologies deployment, stationary storage increase, and electrification growth must be multiplied. It is important that sustainability of electrical generation, battery storage and hydrogen production be evaluated over their lifecycles. Renewables have changed the measurement metrics and new ones are needed. Net-zero trajectories for global businesses must rely on indisputable scientific measurement methods and accurate data that include all Green House Gases. Access to energy today is becoming a societal challenge: industry and governments must find the balance between decarbonizing and ensuring that global energy needs remain accessible for all."

Philippe Vié, Group Vice-President Energy and Utilities sector at Capgemini, adds:

"As energy consumption and greenhouse gas emissions are on the rise again, we need realistic affordable plans to accelerate energy transition.

Curbing the climate change trajectory requires a shift in gears when it comes to investment, and a requirement to consider the right balance between investment and a tangible result. Every dollar invested must lead to a decrease in emissions.

Much more investment in low carbon generation is needed now if we are to meet both the growth in electrification - 2 to 3 times current capacity required by 2050 - and at the same time, decarbonizing electricity generation."

Recommendations from WEMO to meet climate change goals whilst ensuring energy security of supply, and affordability for citizens, are:

- **Setting ambitious but realistic energy transition plans** considering the adaptation time of societies, their industries, and the lifestyles of their populations.
- **Accelerating research in low carbon technologies (solar, wind, electrical batteries, green hydrogen)** and reducing administration obstacles for the construction of renewable installations.
- **Measuring the effect of actions taken.** Financial institutions should define standardized extra-financial criteria, thus enabling comparisons between efforts undertaken by companies.
- **Paying special attention to cybersecurity.** Smarter systems, notably smarter electrical grids, are needed to accommodate a large share of renewables. However, this is tied to an increased cybersecurity risk as more devices become connected to networks.
- **Implementing adaptation measures** to cope with the delay in reaching climate objectives.

The World Energy Markets Observatory is an annual publication by Capgemini that monitors the main indicators of the electricity and gas markets in North America, Europe, Asia (including China and India) and Australia. The 23rd edition, which is drafted mainly from public data combined with Capgemini's expertise in the energy sector, refers to data from 2020 as first half of 2021. Special expertise on regulation and customer behaviour, as well as markets' data has been provided by research teams at De Pardieu Brocas Maffei, VaasaETT and Enerdata.

For more information and to get access to the report, click [here](#)



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