Energy security in the world

Energy security in the world

Regional conflicts and geopolitical strains are highlighting significant fragilities in ...

,?,,,??,?,,,,...

Regional conflicts and geopolitical strains are highlighting significant fragilities in today"s global energy system, making clear the need for stronger policies and greater investments to accelerate and expand the transition to cleaner and more secure technologies, according to the IEA"s newWorld Energy Outlook2024.

The latest edition of theWorld Energy Outlook (WEO),the most authoritative global source of energy analysis and projections, examines how shifting market trends, evolving geopolitical uncertainties, emerging technologies, advancing clean energy transitions and growing climate change impacts are all changing what it means to have secure energy systems. In particular, the new report underscores that today"s geopolitical tensions and fragmentation are creating major risks both for energy security and for global action on reducing greenhouse gas emissions.

The report"s projections based on today"s policy settings indicate that the world is set to enter a new energy market context in the coming years, marked by continued geopolitical hazards but also by relatively abundant supply of multiple fuels and technologies. This includes an overhang of oil and liquefied natural gas (LNG) supply coming into view during the second half of the 2020s, alongside a large surfeit of manufacturing capacity for some key clean energy technologies, notably solar PV and batteries.

Based on today"s policy settings, the report finds that low-emissions sources are set to generate more than half of the world"s electricity before 2030 - and demand for all three fossil fuels - coal, oil and gas - is still projected to peak by the end of the decade. Clean energy is entering the energy system at an unprecedented rate, but deployment is far from uniform across technologies and markets.

In this context, the WEO-2024 also shows that the contours of a new, more electrified energy system are coming into focus as global electricity demand soars. Electricity use has grown at twice the pace of overall energy demand over the last decade, with two-thirds of the global increase in electricity demand over the last ten years coming from China.

"In previous World Energy Outlooks, the IEA made it clear that the future of the global energy system is electric - and now it is visible to everyone," said Dr Birol. "In energy history, we"ve witnessed the Age of Coal and the Age of Oil - and we"re now moving at speed into the Age of Electricity, which will define the global energy system going forward and increasingly be based on clean sources of electricity."

"As with many other global energy trends today, China is a major part of what is happening," Dr Birol added.

Energy security in the world

"Whether it"s investment, fossil fuel demand, electricity consumption, deployment of renewables, the market for EVs, or clean technology manufacturing, we are now in a world where almost every energy story is essentially a China story. Just one example: China"s solar expansion is now proceeding at such a rate that, by the early 2030s - less than ten years from now - China"s solar power generation alone could exceed the total electricity demand of the United States today."

Global electricity demand growth is set to accelerate further in the years ahead, adding the equivalent of Japanese demand to global electricity use each year in a scenario based on today"s policy settings - and rising even more quickly in scenarios that meet national and global goals for achieving net zero emissions.

For clean energy to continue growing at pace, much greater investment in new energy systems, especially in electricity grids and energy storage, are necessary. Today, for every dollar spent on renewable power, 60 cents are spent on grids and storage, highlighting how essential supporting infrastructure is not keeping pace with clean energy transitions. Secure decarbonisation of the electricity sector requires investment in grids and storage to increase even more quickly than clean generation, and the investment ratio to rebalance to 1:1. Many power systems are currently vulnerable to an increase in extreme weather events, putting a premium on efforts to bolster their resilience and digital security.

Despite growing momentum behind clean energy transitions, the world is still a long way from a trajectory aligned with its net zero goals. Decisions by governments, investors and consumers too often entrench the flaws in today"s energy system, rather than pushing it towards a cleaner and safer path, the report finds. Reflecting the uncertainties in the current energy world, the WEO-2024 includes sensitivity analysis for the speed at which renewables and electric mobility might grow, how fast demand for LNG might rise, and how heatwaves, efficiency policies and the rise of artificial intelligence (AI) might affect electricity demand going forward.

Contact us for free full report

Web: https://kary.com.pl/contact-us/
Email: energystorage2000@gmail.com
WhatsApp: 8613816583346